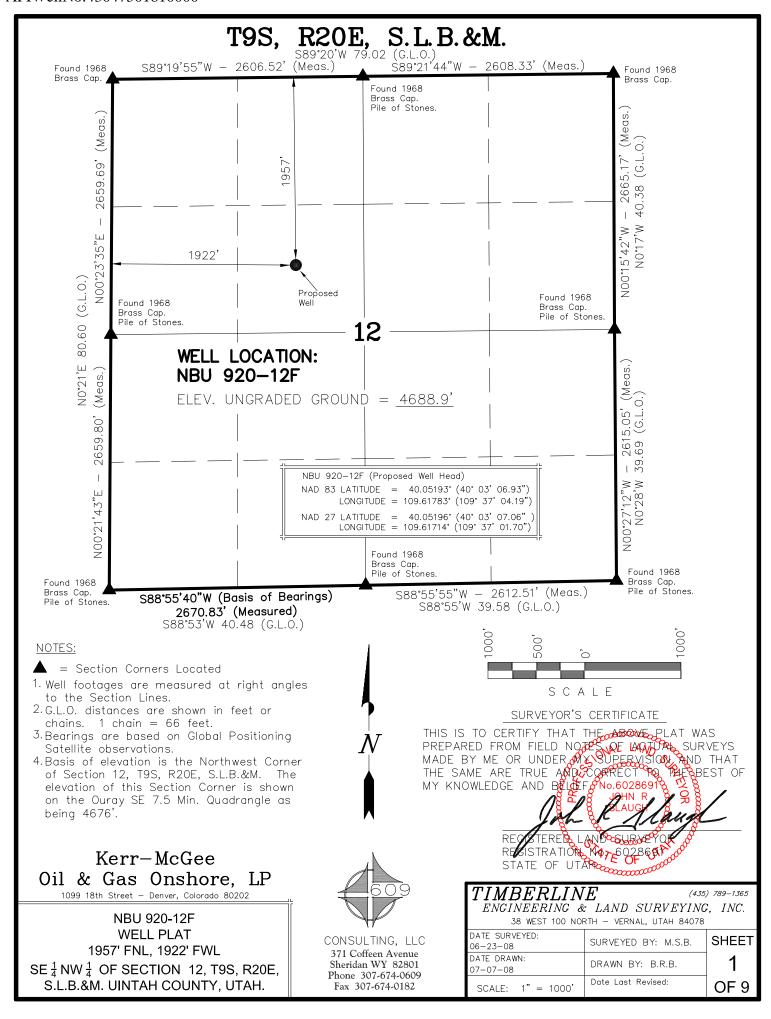
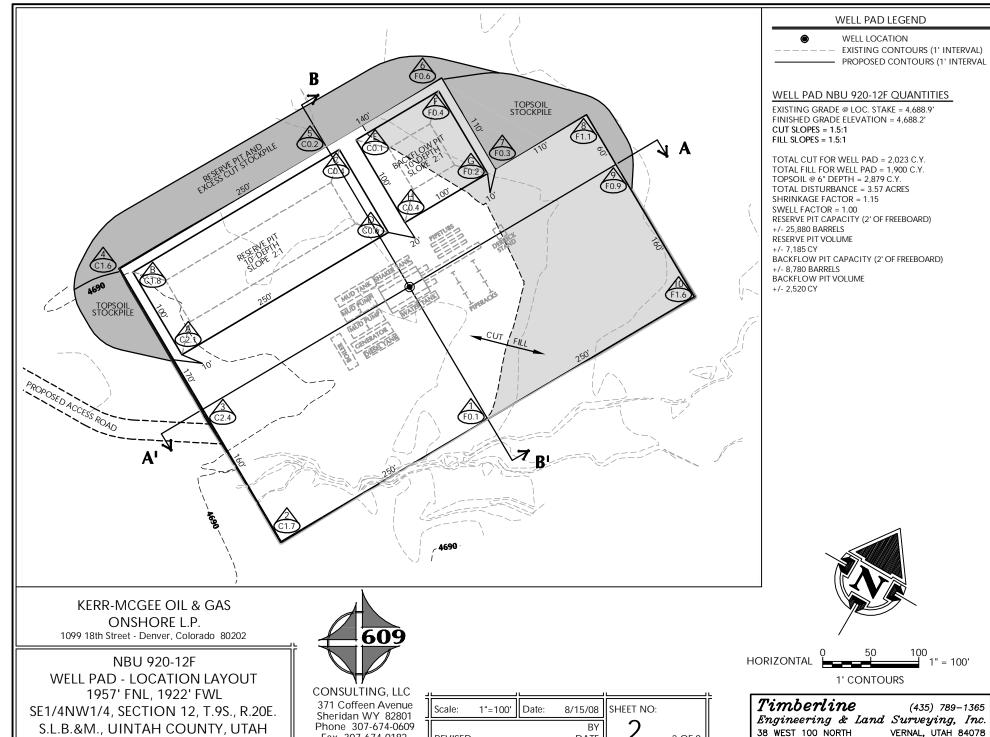
		ST DEPARTMENT DIVISION O	OF NA					FORI		
APPLI	CATION FOR	R PERMIT TO DRILL	_				1. WELL NAME and	NUMBER NBU 920-12F		
2. TYPE OF WORK DRILL NEW WELL (REENTER P&A WELL (DEEPEN WELL (DEEPE							3. FIELD OR WILDCAT NATURAL BUTTES			
4. TYPE OF WELL Gas We		bed Methane Well: NO					5. UNIT or COMMUNITIZATION AGREEMENT NAME NATURAL BUTTES			
6. NAME OF OPERATOR KERR-MCGEE OIL & GAS ONSHORE, L.P.						7. OPERATOR PHONE 720 929-6587				
8. ADDRESS OF OPERATOR P.O. Box 173779, Denver, CO, 80217						9. OPERATOR E-MAIL mary.mondragon@anadarko.com				
10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE) UTU-0144868-B			. MINERAL OWNERSHIP :DERAL I INDIAN STATE FEE FEDERAL INDIAN STATE FEE					FEE (
13. NAME OF SURFACE OWNER (if box 12 = 'fee')							14. SURFACE OWNER PHONE (if box 12 = 'fee')			
15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee')							16. SURFACE OWNER E-MAIL (if box 12 = 'fee')			
17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')		18. INTEND TO COM		LE PRODUCT	ION FRO	М	19. SLANT			
Ute Indian Tribe	YES (Submit C	Commin	gling Applicat	ion) NO	•	VERTICAL (DIR	ORIZONTAL (
20. LOCATION OF WELL	F	OOTAGES	Q	TR-QTR	SECT	TION	TOWNSHIP	RANGE	MERIDIAN	
LOCATION AT SURFACE	1957 F	FNL 1922 FWL		SENW		2	9.0 S	20.0 E	S	
Top of Uppermost Producing Zone	1957 F	NL 1922 FWL		SENW 12		9.0 S	20.0 E	S		
At Total Depth	1957 F	NL 1922 FWL		SENW	12	2	9.0 S	20.0 E	S	
21. COUNTY UINTAH		22. DISTANCE TO N	19	922			23. NUMBER OF AC	600	JNIT	
		25. DISTANCE TO N (Applied For Drilling	g or Co		AME POO	L	26. PROPOSED DEP	TH D: 10800 TVD: 0		
27. ELEVATION - GROUND LEVEL 28. BOND NUM 4704				000291			29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE Permit #43-8496			
		A	TTACH	HMENTS						
VERIFY THE FOLLOWING	ARE ATTACH	HED IN ACCORCAN	CE WI	ITH THE UT	TAH OIL	AND G	AS CONSERVATION	ON GENERAL RU	LES	
WELL PLAT OR MAP PREPARED BY	LICENSED SU	RVEYOR OR ENGINEE	R	№ сом	PLETE DE	RILLING	PLAN			
AFFIDAVIT OF STATUS OF SURFACE	OWNER AGR	EEMENT (IF FEE SURF	ACE)	FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER						
DIRECTIONAL SURVEY PLAN (IF DIDENTIFE DESCRIPTION OF DESCRIPTION O	RECTIONALLY	OR HORIZONTALLY		№ торо	GRAPHIC	CAL MAF	•			
NAME Raleen White	т	ITLE Sr. Regulatory Ana	alyst			PHON	E 720 929-6666			
SIGNATURE	D	ATE 12/30/2008				EMAIL	raleen.white@anada	ko.com		
API NUMBER ASSIGNED 43047501810000	A	PPROVAL			ì	Sol	Right			
						Perm	it Manager			

		Proposed Ho	le, Casing, and Cement			
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)		
Surf	12.25	9.625	0	2800		
Pipe	Grade	Length	Weight			
	Grade J-55 LT&C	2800	36.0			
	Cement Interval	Top (MD)	Bottom (MD)			
		0	2800			
		Cement Description	Class	Sacks	Yield	Weight
			Premium Foamed Cement	315	1.18	15.6

		Proposed Ho	ole, Casing, and Cement			
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)		
Prod	7.875	4.5	0	10800		
Pipe	Grade	Length	Weight			
	Grade I-80 LT&C	10800	11.6			
	Cement Interval	Top (MD)	Bottom (MD)			
		0	10800			
		Cement Description	Class	Sacks	Yield	Weight
			Premium Lite High Strength	520	3.38	12.5
			Possolan-Lime Cement	1680	1.31	14.3



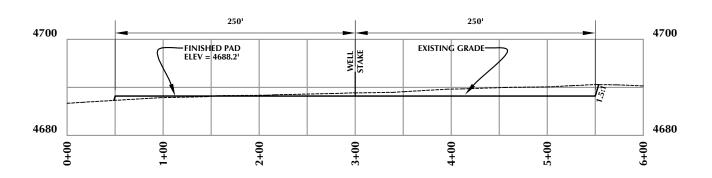


2 OF 9

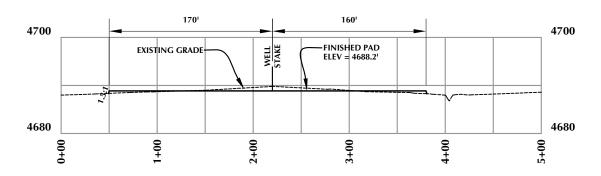
DATE

Fax 307-674-0182

REVISED:



CROSS SECTION A-A'



CROSS SECTION B-B'

KERR-MCGEE OIL & GAS ONSHORE L.P.

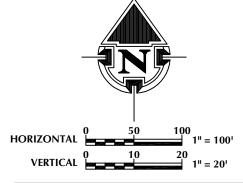
1099 18th Street - Denver, Colorado 80202

NBU 920-12F WELL PAD - CROSS SECTIONS 1957' FNL, 1922' FWL SE1/4NW1/4, SECTION 12, T.9S., R.20E. S.L.B.&M., UINTAH COUNTY, UTAH





j	Scale:	1"=100'	Date:	8/15/08	SHEET NO:		Ī
	REVISED:			BY Date	3	3 OF 9	



Timberline (435) 789-1365
Engineering & Land Surveying, Inc.
38 WEST 100 NORTH VERNAL, UTAH 84078

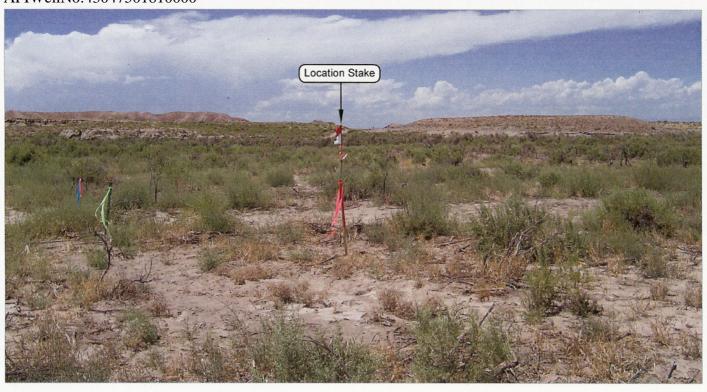


PHOTO VIEW: TO LOCATION STAKE

CAMERA ANGLE: NORTHWESTERLY



PHOTO VIEW: FROM BEGINNING OF PROPOSED ROAD

CAMERA ANGLE: NORTHEASTERLY

Kerr-McGee Oil & Gas Onshore, LP

1099 18th Street - Denver, Colorado 80202

NBU 920-12F 1957' FNL, 1922' FWL SE $\frac{1}{4}$ NW $\frac{1}{4}$ OF SECTION 12, T9S, R20E, S.L.B.&M. UINTAH COUNTY, UTAH.



CONSULTING, LLC 371 Coffeen Avenue Sheridan WY 82801 Phone 307-674-0609 Fax 307-674-0182

LOCA	TION	PHOTOS

DATE TAKEN: 07-29-08 DATE DRAWN: 07-31-08

TAKEN BY: JD.H

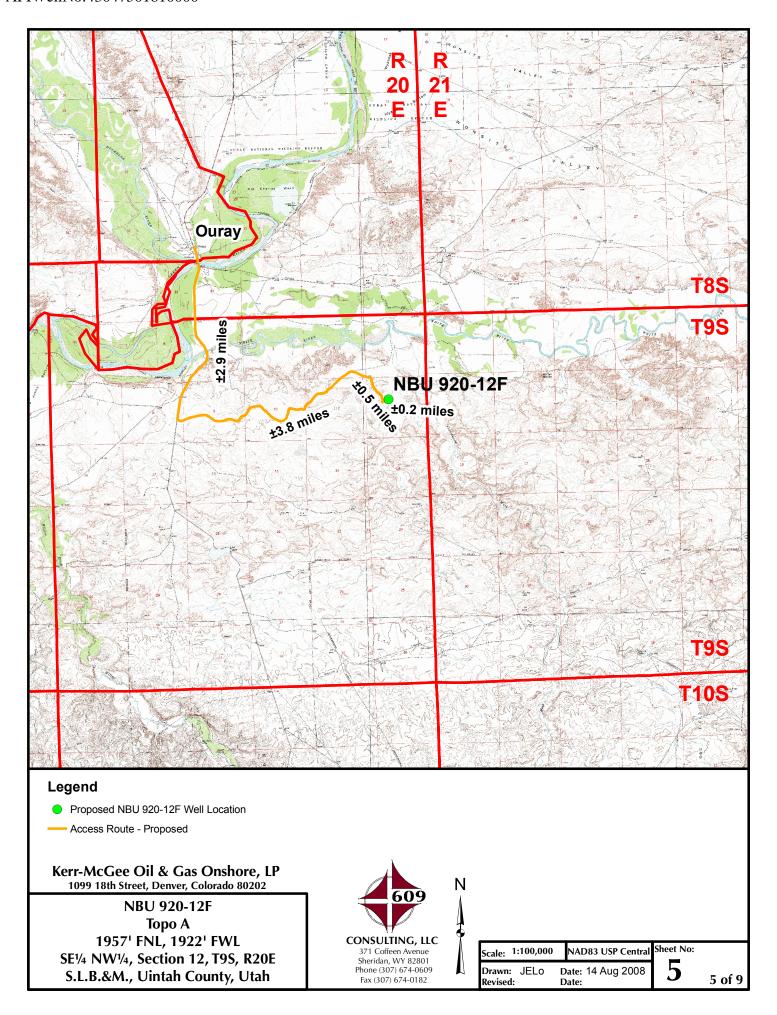
DRAWN BY: B.R.B.

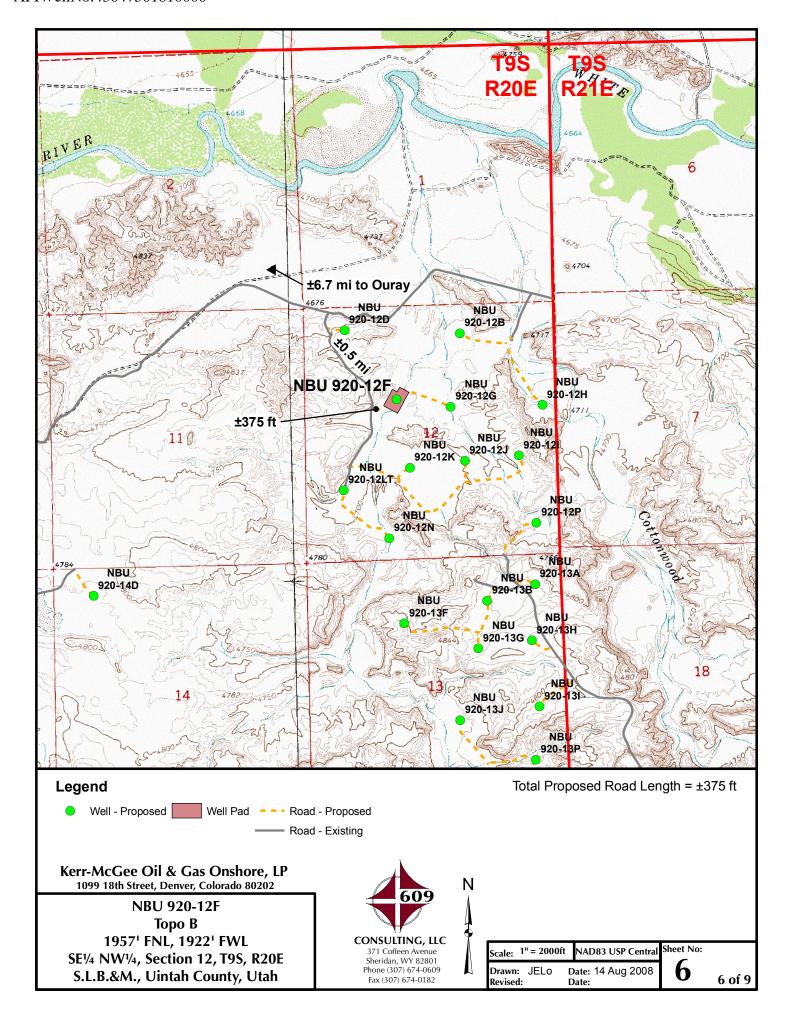
REVISED:

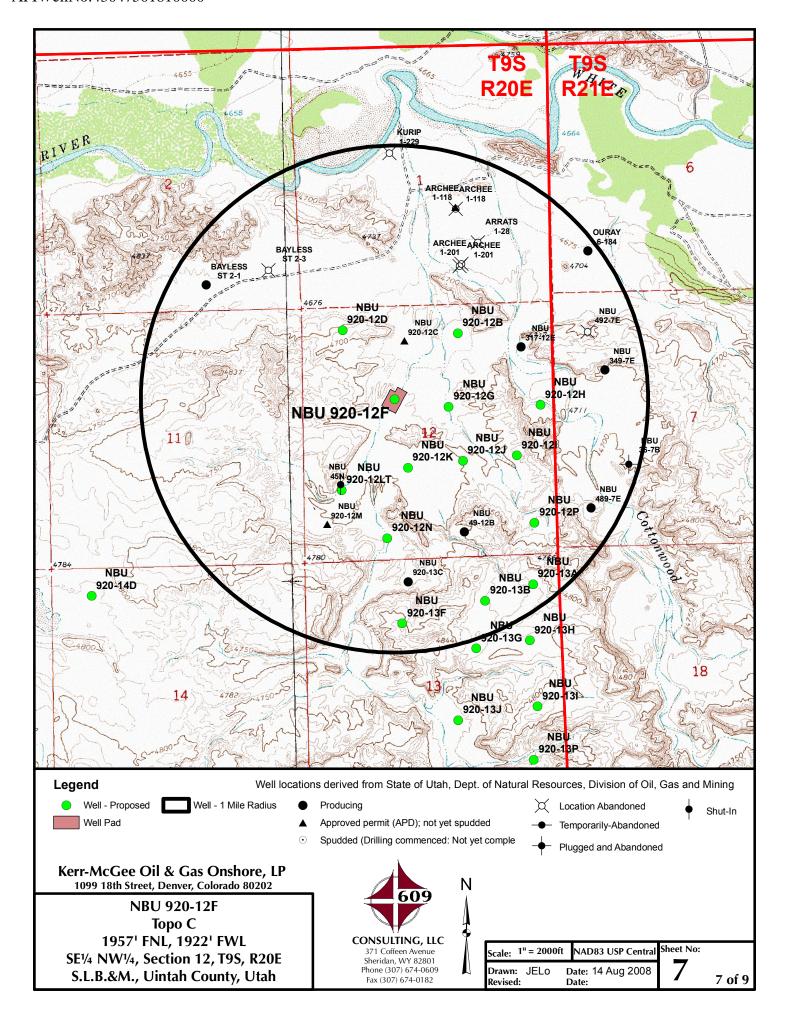
Timberline

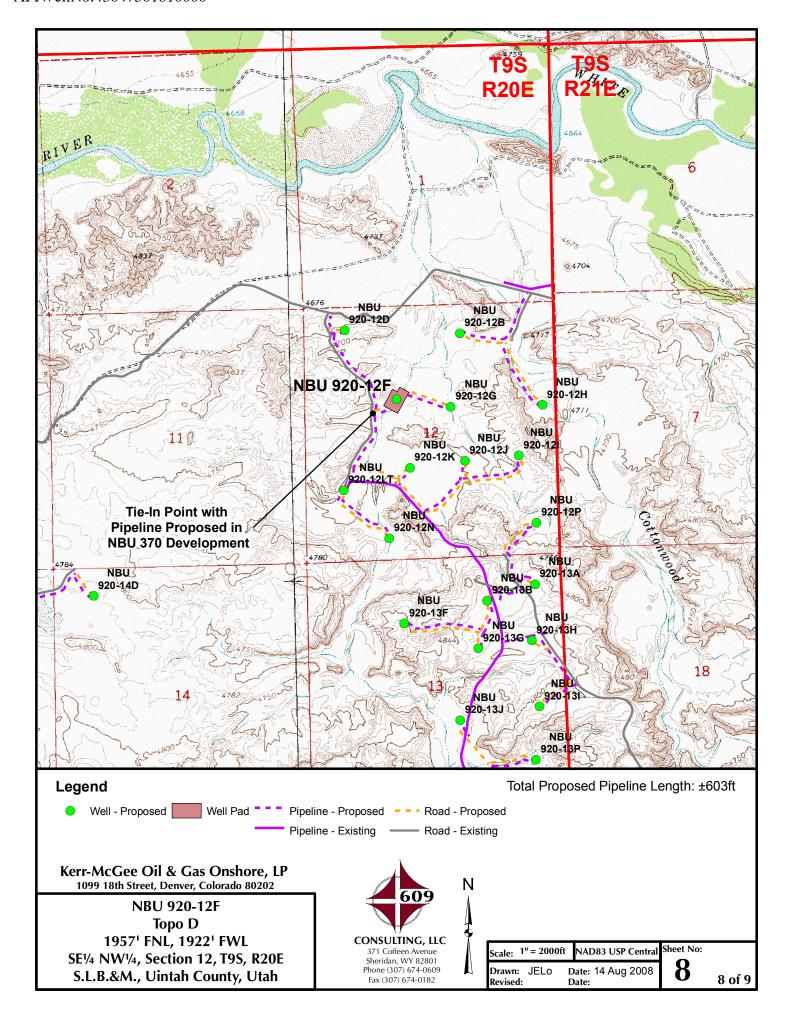
(435) 789-1365 Engineering & Land Surveying, Inc. 38 WEST 100 NORTH VERNAL, UTAH 84078

SHEET OF 9









Kerr-McGee Oil & Gas Onshore, LP NBU 920-12F Section 12, T9S, R20E, S.L.B.&M.

PROCEED IN A WESTERLY DIRECTION FROM VERNAL, UTAH ALONG U.S. HIGHWAY 40 APPROXIMATELY 13.9 MILES TO THE JUNCTION OF STATE HIGHWAY 88. EXIT LEFT AND PROCEED IN A SOUTHERLY DIRECTION ALONG STATE HIGHWAY 88 APPROXIMATELY 16.8 MILES TO OURAY, UTAH. FROM OURAY, PROCEED IN A SOUTHERLY DIRECTION ALONG THE SEEP RIDGE ROAD (COUNTY B ROAD 2810) APPROXIMATELY 2.9 MILES TO THE INTERSECTION OF AN EXISTING ROAD TO THE EAST. EXIT LEFT AND PROCEED IN A NORTHEASTERLY DIRECTION ALONG EXISTING ROAD APPROXIMATELY 3.8 MILES TO THE INTERSECTION OF AN EXISTING ROAD TO THE SOUTH. EXIT RIGHT AND PROCEED IN A SOUTHERLY DIRECTION ALONG EXISTING ROAD APPROXIMATELY 0.5 MILES TO THE PROPOSED ACCESS ROAD. FOLLOW ROAD FLAGS IN A NORTHEASTERLY DIRECTION APPROXIMATELY 375 FEET TO THE PROPOSED LOCATION.

TOTAL DISTANCE FROM VERNAL, UTAH TO THE PROPOSED WELL LOCATION IS APPROXIMATELY 38.0 MILES IN A SOUTHERLY DIRECTION.

NBU 920-12F SENW Sec. 12, T9S,R20E UINTAH COUNTY, UTAH UTU-0144868-B

ONSHORE ORDER NO. 1

DRILLING PROGRAM

1. Estimated Tops of Important Geologic Markers:

<u>Formation</u>	<u>Depth</u>
Uinta	0- Surface
Green River	1822'
Bird's Nest	2086'
Mahogany	2616'
Wasatch	5284'
Mesaverde	8530'
MVU2	9521'
MVL1	10029'
TD	10800'

2. Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:

Substance	<u>Formation</u>	<u>Depth</u>	
	Green River	1822'	
	Bird's Nest	2086'	
	Mahogany	2616'	
Gas	Wasatch	5284'	
Gas	Mesaverde	8530'	
Gas	MVU2	9521'	
Gas	MVL1	10029'	
Water	N/A		
Other Minerals	N/A		

3. Pressure Control Equipment (Schematic Attached)

Please see the Natural Buttes Unit Standard Operating Procedure (SOP).

4. Proposed Casing & Cementing Program:

Please see the Natural Buttes Unit SOP.

5. <u>Drilling Fluids Program</u>:

Please see the Natural Buttes Unit SOP.

6. Evaluation Program:

Please see the Natural Buttes Unit SOP.

7. Abnormal Conditions:

Maximum anticipated bottomhole pressure calculated at 10800' TD, approximately equals 6696 psi (calculated at 0.62 psi/foot).

Maximum anticipated surface pressure equals approximately 4320 psi (bottomhole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot).

8. Anticipated Starting Dates:

Drilling is planned to commence immediately upon approval of this application.

9. Variances:

Please see Natural Buttes Unit SOP Onshore Order #2 – Air Drilling Variance Kerr-McGee Oil & Gas Onshore LP (KMG) respectfully requests a variance to several requirements associated with air drilling outlined in Onshore Order 2

- Blowout Prevention Equipment (BOPE) requirements;
- Mud program requirements; and
- Special drilling operation (surface equipment placement) requirements associated with air drilling.

This Standard Operating Practices addendum provides supporting information as to why KMG current air drilling practices for constructing the surface casing hole should be granted a variance to Onshore Order 2 air drilling requirements.

The reader should note that the air rig is used only to construct a stable surface casing hole through a historically difficult lost circulation zone. A conventional rotary rig follows the air rig, and is used to drill and construct the majority of the wellbore.

More notable, KMG has used the air rig layout and procedures outlined below to drill the surface casing hole in approximately 675 wells without incident of blow out or loss of life.

Background

In a typical well, KMG utilizes an air rig for drilling the surface casing hole, an interval from the surface to surface casing depths, which varies in depth from 1,700 to 2,800 feet. The air rig drilling operation does not drill through productive or over pressured formations in KMG field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest.

Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may be set deeper in areas that the surface formation is not found competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.

The air rig is then mobilized to drill the surface casing hole by drilling a 12-1/4 inch hole

to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 12-1/4 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 9-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.

KMG fully appreciates Onshore Order 2 well control and safety requirements associated with a typical air drilling operations. However, the requirements of Onshore Order 2 are excessive with respect to the air rig layout and drilling operation procedures that are currently in practice to drill and control the surface casing hole in KMG Fields.

Variance for BOPE Requirements

The air rig operation utilizes a properly lubricated and maintained air bowl diverter system which diverts the drilling returns to a six-inch blooie line. The air bowl is the only piece of BOPE equipment which is installed during drilling operations and is sufficient to contain the air returns associated with this drilling operation. As was discussed earlier, the drilling of the surface hole does not encounter any over pressured or productive zones, and as a result standard BOPE equipment should not be required. In addition, standard drilling practices do not support the use of BOPE on 40 feet of conductor pipe.

Variance for Mud Material Requirements

Onshore Order 2 also states that sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring adequate well control. Once again, the surface hole drilling operations does not encounter over pressured or productive intervals, and as a result there is not a need to control pressure in the surface hole with a mud system. Instead of mud, the air rigs utilize water from the reserve pit for well control, if necessary. A skid pump which is located near the reserve pit (see attachment) will supply the water to the well bore.

Variance for Special Drilling Operation (surface equipment placement) Requirements Onshore Order 2 requires specific safety distances or setbacks for the placement of associated standard air drilling equipment, wellbore, and reserve pits. The air rigs used to drill the surface holes are not typical of an air rig used to drill a producing hole in other parts of the US. These are smaller in nature and designed to fit a KMG location. The typical air rig layout for drilling surface hole in the field is attached.

Typically the blooie line discharge point is required to be 100 feet from the well bore. In the case of a KMG well, the reserve pit is only 45 feet from the rig and is used for the drill cuttings. The blooie line, which transports the drill cuttings from the well to the reserve pit, subsequently discharges only 45 feet from the well bore.

Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see attachment) are located on the rig (1250 cfm) and on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.

Lastly, Onshore Order 2 addresses the need for an automatic igniter or continuous pilot light on the blooie line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations.

Conclusion

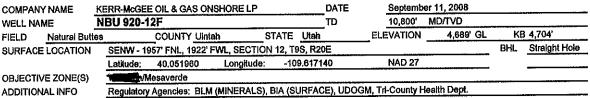
The air rig operating procedures and the attached air rig layout have effectively maintained well control while drilling the surface holes in KMG Fields. KMG respectfully requests a variance from Onshore Order 2 with respect to air drilling well control requirements as discussed above.

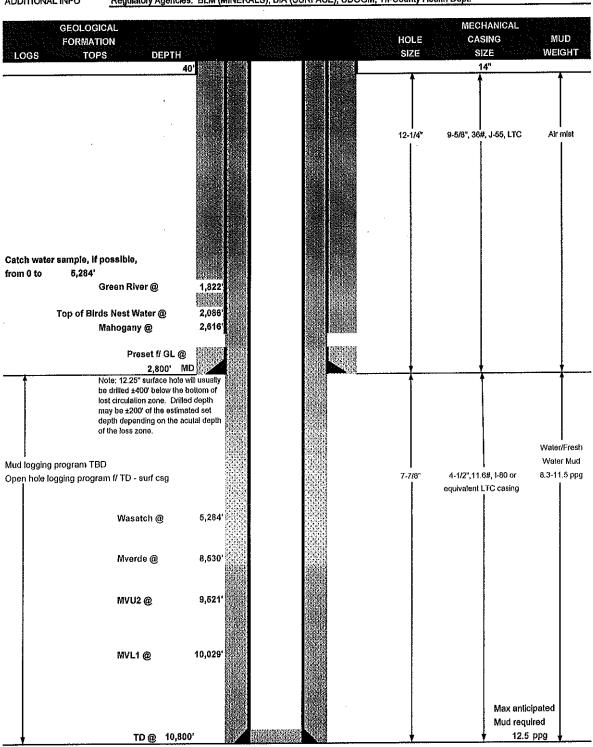
10. Other Information:

Please see Natural Buttes Unit SOP.



KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM





KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM

CASING PROGRAM

									ESIGN FACT	ORS
	SIZE	IN'	TERVA	L	WT.	GR.	CPLG.	BURST	COLLAPSE	TENSION
CONDUCTOR	14"		0-40'	•						
								3520	2020	453000
SURFACE	9-5/8*	0	to	2,800	36.00	J-55	LTC	0.76	1.54	5.13
								7780	e350	WORTH CALANIA SANDAR SA
PRODUCTION	4-1/2"	0	to	10800	11.60	1-80	LTC	1.68	0.90	1.84
						e e e e e e e e e e e e e e e e e e e				
		•								

¹⁾ Max Anticipated Surf. Press.(MASP) (Surface Casing) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac gradient x TVD of next csg point)

2) MASP (Prod Casing) = Pore Pressure at TD - (.22 psl/ft-partial evac gradient x TD)

(Burst Assumptions: TD =

12.5 ppg)

.22 psi/ft = gradient for partially evac wellbore

(Collapse Assumption: Fully Evacuated Casing, Max MW)

(Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

MASP 4320 psi

CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACÉ	LEAD	500	Premium cmt + 2% CaCl	215	60%	15.60	1.18
Option 1			± 25 pps flocele				
•	TOP OUT CMT (1)	250	20 gals sodium silicate + Premium cmt	100	****	15.60	1.18
			+ 2% CaCl ± 25 pos flocele				
	TOP OUT CMT (2)	as required	Premium cmt + 2% CaCl	as req.		15,60	1.18
SURFACE			NOTE: If well will circulate water to surface	option 2	ibu ed Illw		
Option 2	LEAD	2000	Prem cmt + 16% Gel + 10 pps gilsonite	230	35%	11.00	3.82
		00000	4 25 pps Flocele #3% galt BWCC # 1846				3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
	TAIL	500	Premium cmt + 2% CaCl	180	35%	15.60	1.18
			+ 25 ppa llocele	* WAR			
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.60	1.18
	-	200	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	COCK COMP		40	100000000000000000000000000000000000000
PRODUCTIO	N LEAD	4,780'	Premium Lite II + 3% KCI + 0.25 pps	520	60%	12.50	3,38
			celloffake + 5 pps glisonite + 10% gel		ATTRICK TO		
			+ 0.5% extender			Car Coon Coronage	and the second second second
		Lile >> 30 55		85 A 300	ama tes	· 海 () 整	
	TAIL	6,020'	50/50 Poz/G + 10% salt + 2% gel	1680	60%	14,30	1.31
		38 A 28 A W	+.1% R-3	大 公司	Editorias	16.0数编码。	H. Commercial

^{*}Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

FLOAT EQUIPMENT & CENTRALIZERS

SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe.							
PRODUCTION	Float shoe, 1 jt, float collar. Centralize first 3 joints & every third joint to top of tail cement with bow spring centralizers.							

ADDITIONAL INFORMATION

BOPE: 11" 5M with or	e annular and 2 rams. Test to 5,000 psi (annular to 2,	,500 psl) prior to drilling out. Record on chart recorder &
tour sheet. Function to	st rams on each trip. Maintain safety valve & inside B	OP on rig floor at all times. Kelly to be equipped with upper
& lower kelly valves.		
Drop Totco surveys ev	ery 2000'. Maximum allowable hole angle is 5 degree	9.
Most rigs have PVT S	stems for mud monitoring. If no PVT is available, visua	ai monitoring will be utilized.
LLING ENGINEER:		DATE:
	Brad Laney	
ILLING SUPERINTENDEN	Т;	DATE:

Randy Bayne NBU 92

NBU 920-12F

^{*}Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

NBU 920-12F SENW SEC. 12 ,T9S,R20E UINTAH COUNTY, UTAH UTU-0144868-B

ONSHORE ORDER NO. 1

MULTI-POINT SURFACE USE & OPERATIONS PLAN

1. Existing Roads:

Refer to the attached location directions.

Refer to Topo Maps A and B for location of access roads within a 2-mile radius.

2. Planned Access Roads:

No new access road is planned, as this is a twin location. Refer to Topo Map B.

Existence of pipelines; maximum grade; turnouts; major cut and fills, culverts, or bridges; gates, cattle guards, fence cuts, or modifications to existing facilities were determined at the on-site.

Please see the Natural Buttes Unit Standard Operating Procedure (SOP).

3. Location of Existing Wells Within a 1-Mile Radius:

Please refer to Topo Map C.

4. Location of Existing & Proposed Facilities:

Please see the Natural Buttes Unit SOP.

Refer to Topo Map D for the location of the proposed pipelines.

Variances to Best Management Practices (BMPs) Requested:

This exception to the BMP should be granted by the BLM Authorized Officer because indurated bedrock, such as sandstone, is at or within 2 feet of the surface and the soil has a poor history for successful rehabilitation.

All facilities will be painted within six months of installation. Facilities required to comply with the Occupational Safety and Health Act (OSHA) will be excluded. The requested color is Shadow gray, a non-reflective earthtone.

Interim Surface Reclamation Plan:

This exception is requested due to the current twin and multi-well program. If determined that this well will not be a candidate for either twinning &/or multi-well the operator shall spread the topsoil pile on the location up to the rig anchor points. The location will be reshaped to the

original contour to the extent possible. The operator will reseed the area using the BLM recommended seed mixture and reclamation methods.

5. Location and Type of Water Supply:

Please see the Natural Buttes SOP.

6. Source of Construction Materials:

Please see the Natural Buttes SOP.

7. Methods of Handling Waste Materials:

Please see the Natural Buttes SOP.

A plastic reinforced liner is to be used as discussed during on-site inspection. It will be a minimum of 20 mil thick and felt, with sufficient bedding used to cover any rocks. The liner will overlap the pit walls and be covered with dirt and/or rocks to hold it in place. No trash or scrap that could puncture the liner will be disposed of in the pit.

Any produced water from the proposed well will be contained in a water tank and will then be hauled by truck to one of the pre-approved disposal sites: RNI, Sec. 5, T9S, R22E, NBU #159, Sec. 35, T9S R21E, Ace Oilfield, Sec. 2, T6S, R20E, MC&MC, Sec. 12, T6S, R19E, Pipeline Facility Sec. 36, T9S, R20E, Goat Pasture Evaporation Pond SW/4 Sec. 16, T10S, R22E, Bonanza Evaporation Pond Sec. 2, T10S, R23E (Request is in lieu of filing Form 3160-5, after initial production).

8. Ancillary Facilities:

Please see the Natural Buttes SOP.

9. Well Site Layout: (See Location Layout Diagram)

The attached Location Layout Diagram describes drill pad cross-sections, cuts and fills, and locations of the mud tanks, reserve pit, flare pit, pipe racks, trailer parking, spoil dirt stockpile(s), and surface material stockpile(s).

Please see the attached diagram to describe rig orientation, parking areas, and access roads.

Location size may change prior to the drilling of the well due to the current rig availability. If the proposed location is not large enough to accommodate the drilling rig. The location will be resurveyed and a form 3160-5 will be submitted.

10. Plans for Reclamation of the Surface:

Please see the Natural Buttes SOP.

Operator shall call the BIA for the seed mixture when final reclamation occurs.

11. Surface/Mineral Ownership:

The well pad and access road are located on lands owned by:

Ute Indian Tribe P.O. Box 70 Fort Duchesne, Utah 84026 (435) 722-5141

The mineral ownership is listed below:

United States of America Bureau of Land Management 170 South 500 East Vernal, UT 84078 (435)781-4400

12. Stipulations/Notices/Mitigation:

There are no stipulations or notices for this location.

13. Other Information:

A Class III archaeological survey has been performed and will be submitted. Attached is the cover page for the Paleontological Report (IPC 08-142).

This location is not within 460' from the boundary of the Natural Buttes Unit, nor is it within 460' of any non-committed tract lying within the boundaries of the Unit.

14. Lessee's or Operator's Representative & Certification:

Raleen White Sr. Regulatory Analyst Kerr-McGee Oil & Gas Onshore LP P.O. Box 173779 Denver, CO 80217-3779 (720) 929-6666 Randy Bayne
Drilling Manager
Kerr-McGee Oil & Gas Onshore LP
1368 South 1200 East
Vernal, UT 84078
(435) 781-7018

Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

Kerr-McGee Oil & Gas Onshore LP is considered to be the operator of the subject well. Kerr-McGee Oil & Gas Onshore LP agrees to be responsible under the terms and conditions of the lease for the operations conducted upon leased lands.

The Operator will be fully responsible for the actions of its subcontractors. A complete copy of the approved "Application for Permit to Drill" will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations.

Bond coverage pursuant to 43 CFR 3104 for lease activities is being provided by Bureau of Indian Affairs Nationwide Bond #RLB0005239.

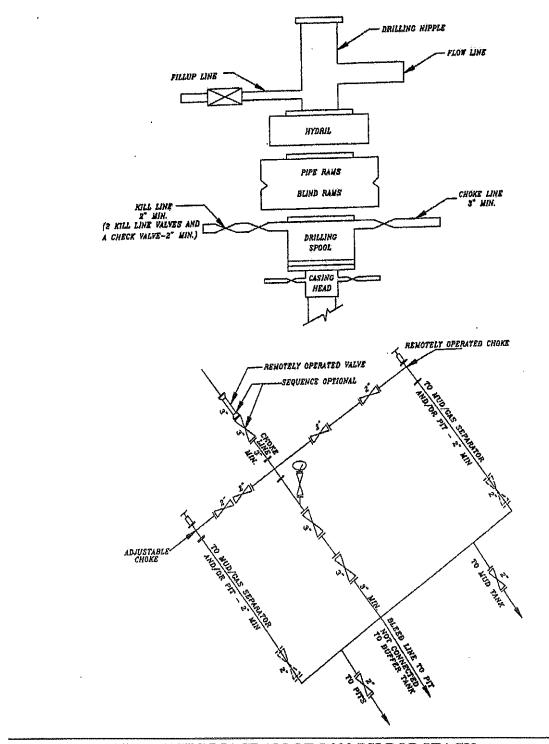
I hereby certify that I, or persons under my supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions that currently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed by the Operator, its contractors, and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

Kallen White

9/11/2008

Date

EXHIBIT A

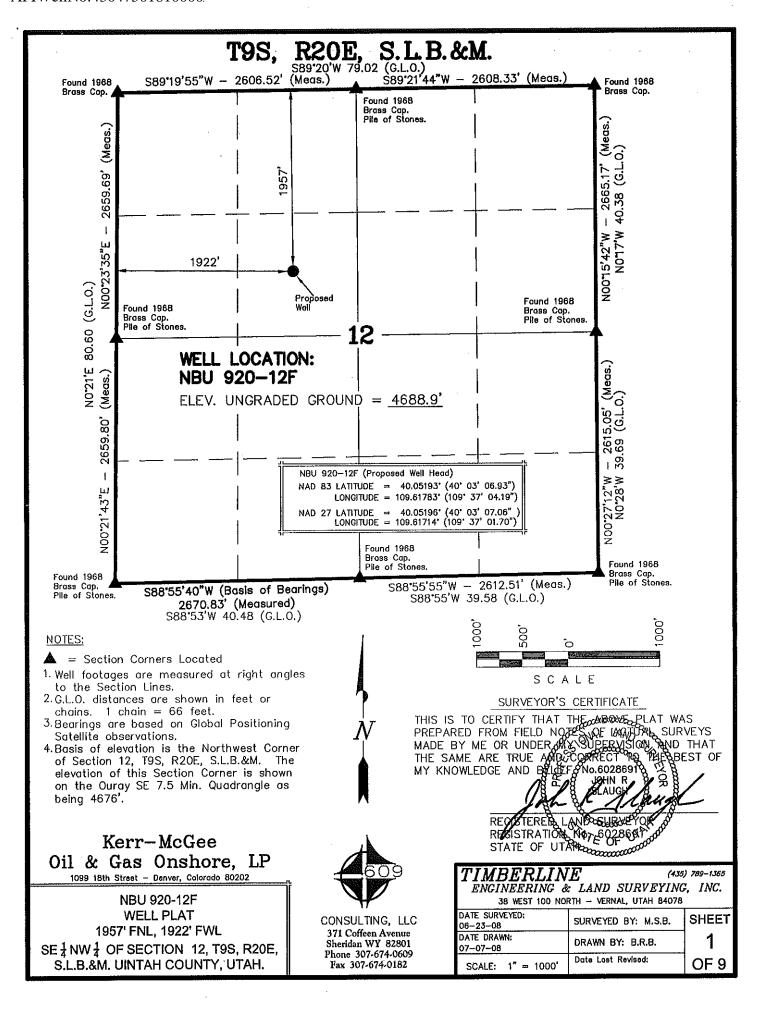


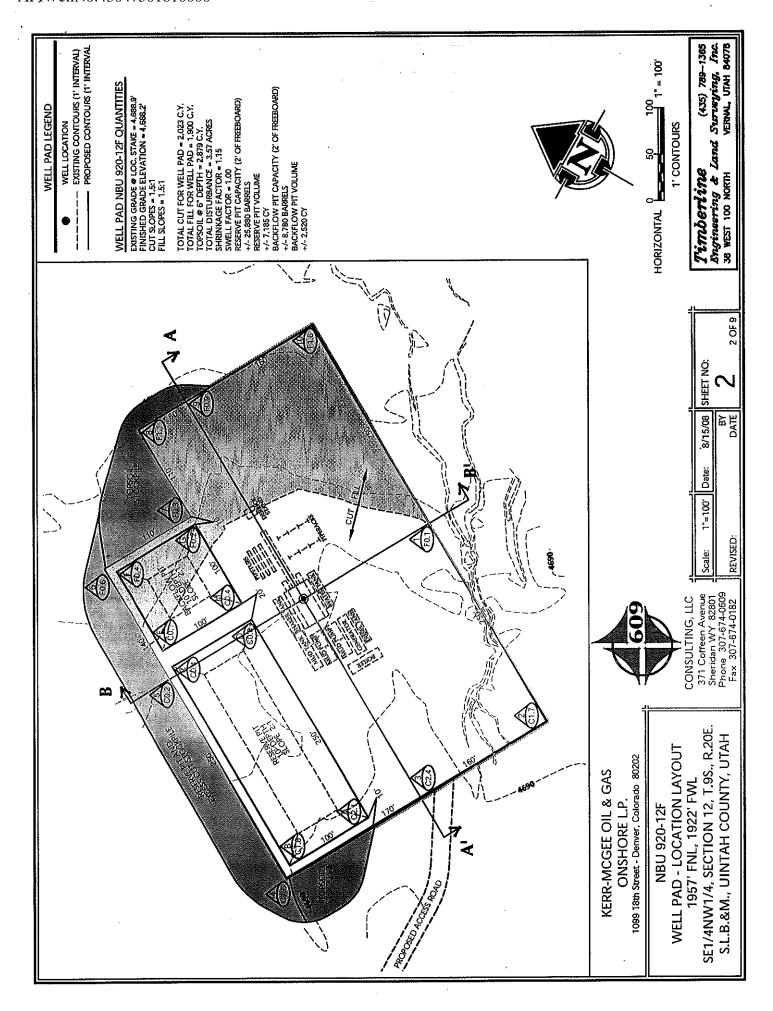
SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK

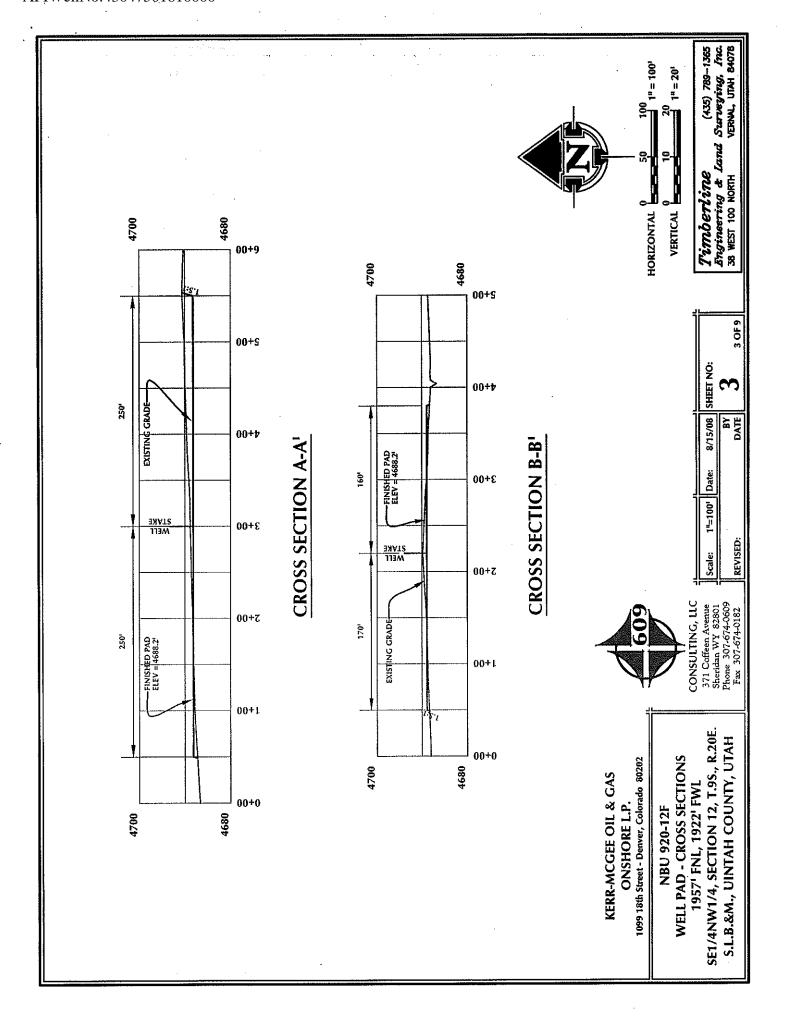
Kerr-McGee Oil & Gas Onshore, LP NBU 920-12F Section 12, T9S, R20E, S.L.B.&M.

PROCEED IN A WESTERLY DIRECTION FROM VERNAL, UTAH ALONG U.S. HIGHWAY 40 APPROXIMATELY 13.9 MILES TO THE JUNCTION OF STATE HIGHWAY 88. EXIT LEFT AND PROCEED IN A SOUTHERLY DIRECTION ALONG STATE HIGHWAY 88 APPROXIMATELY 16.8 MILES TO OURAY, UTAH. FROM OURAY, PROCEED IN A SOUTHERLY DIRECTION ALONG THE SEEP RIDGE ROAD (COUNTY B ROAD 2810) APPROXIMATELY 2.9 MILES TO THE INTERSECTION OF AN EXISTING ROAD TO THE EAST. EXIT LEFT AND PROCEED IN A NORTHEASTERLY DIRECTION ALONG EXISTING ROAD APPROXIMATELY 3.8 MILES TO THE INTERSECTION OF AN EXISTING ROAD TO THE SOUTH. EXIT RIGHT AND PROCEED IN A SOUTHERLY DIRECTION ALONG EXISTING ROAD APPROXIMATELY 0.5 MILES TO THE PROPOSED ACCESS ROAD. FOLLOW ROAD FLAGS IN A NORTHEASTERLY DIRECTION APPROXIMATELY 375 FEET TO THE PROPOSED LOCATION.

TOTAL DISTANCE FROM VERNAL, UTAH TO THE PROPOSED WELL LOCATION IS APPROXIMATELY 38.0 MILES IN A SOUTHERLY DIRECTION.







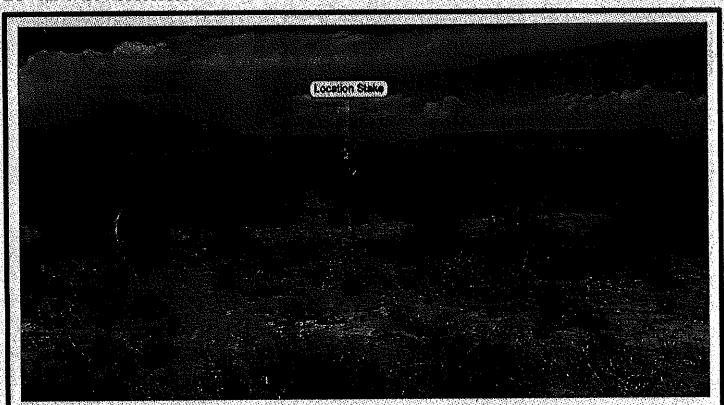


PHOTO VIEW: TO LOCATION STAKE

CAMERA ANGLE: NORTHWESTERLY

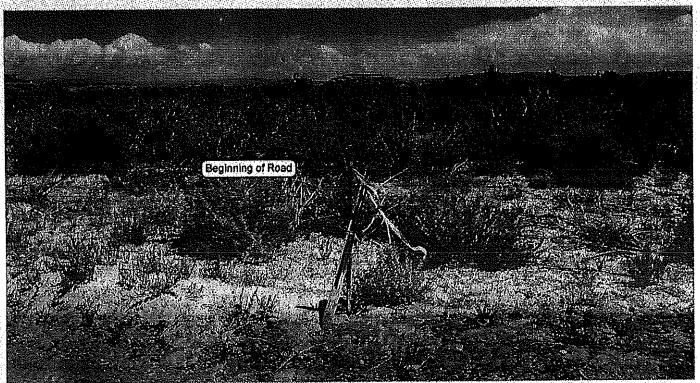


PHOTO VIEW: FROM BEGINNING OF PROPOSED ROAD

CAMERA ANGLE: NORTHEASTERLY

Kerr-McGee Oil & Gas Onshore, LP 1099 18th Street - Denver, Colorado 80202

NBU 920-12F 1957' FNL, 1922' FWL SE 1 NW 1 OF SECTION 12, T9S, R20E, S.L.B.&M. UINTAH COUNTY, UTAH.



CONSULTING, LLC 371 Coffeen Avenue Sheridan WY 82801. Phone 307-674-0609 Fax 307-674-0182

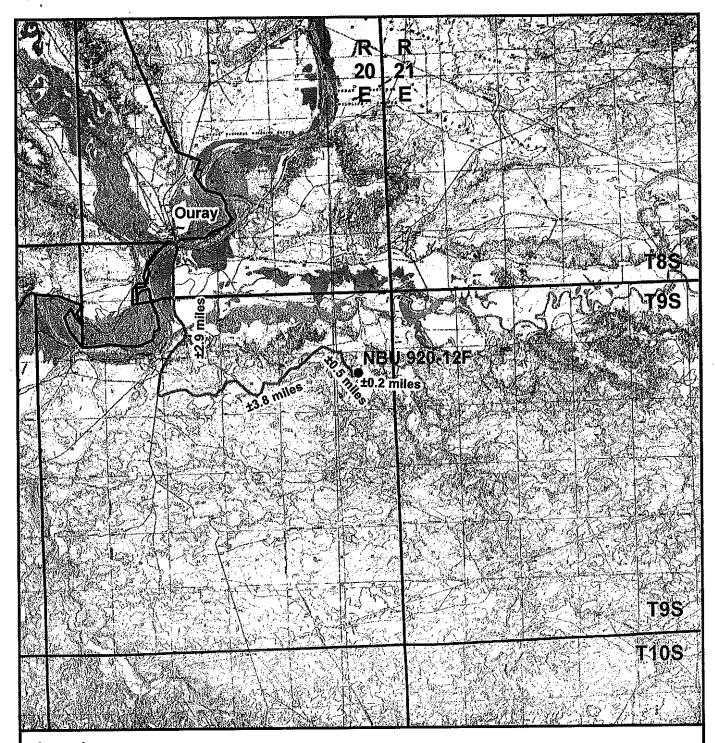
LOCATION PHOTOS	
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DATE TAKEN: 07-29-08 DATE DRAWN: 07-31-08

TAKEN BY: JO.H DRAWN BY: B.R.B. REVISED:

Timberline

(435) 789-1365 Engineering & Land Surveying, Inc.
38 WEST 100 NORTH VERNAL, UTAH 84078 SHEET OF 9



Legend

- Proposed NBU 920-12F Well Location
- Access Route Proposed

Kerr-McGee Oil & Gas Onshore, LP 1099 18th Street, Denver, Colorado 80202

NBU 920-12F Topo A 1957' FNL, 1922' FWL SE1/4 NW1/4, Section 12, T9S, R20E S.L.B.&M., Uintah County, Utah

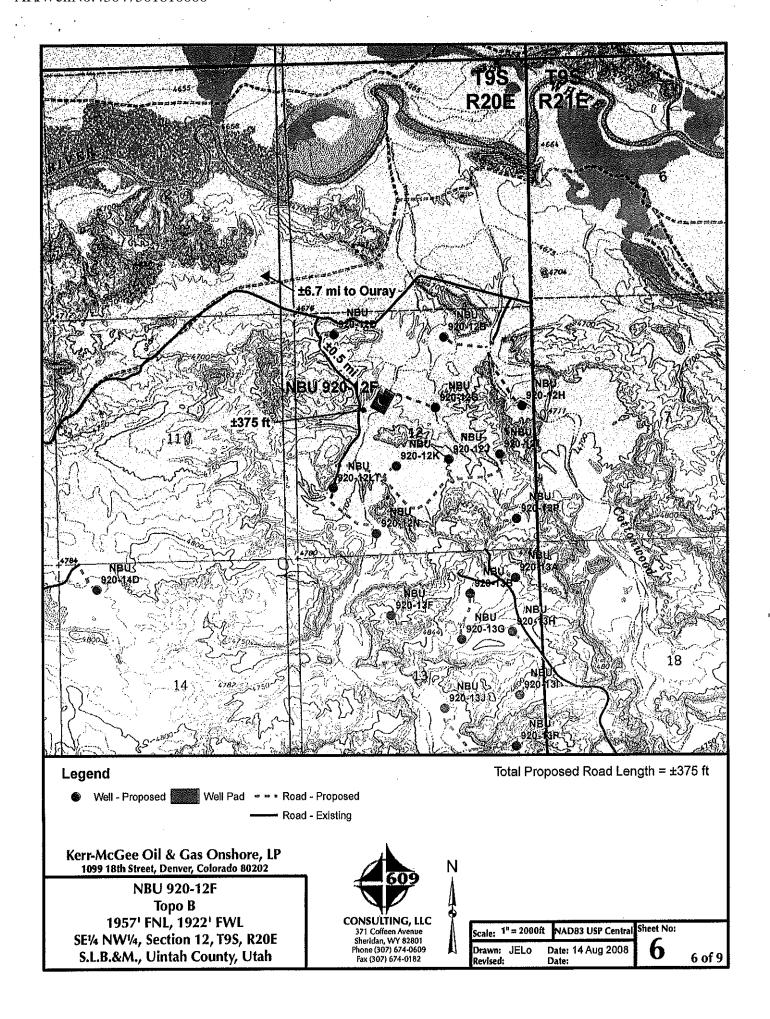


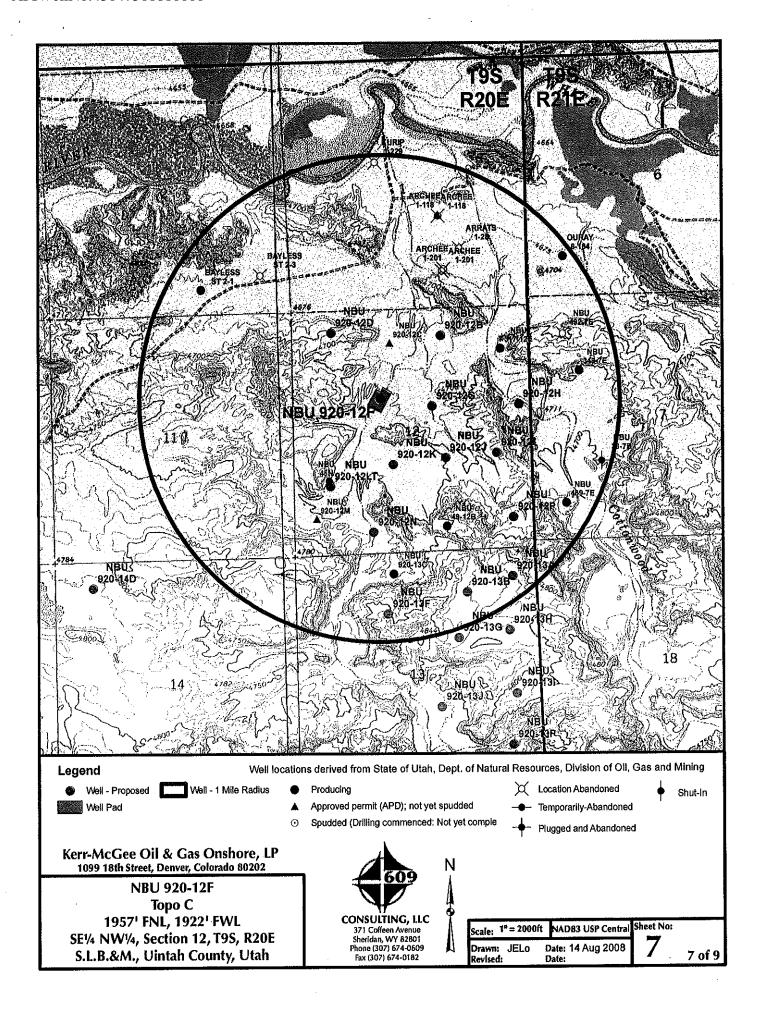
CONSULTING, LLC 371 Coffeen Avenue Sheridan, WY 82801 Phone (307) 674-0609 Fax (307) 674-0182

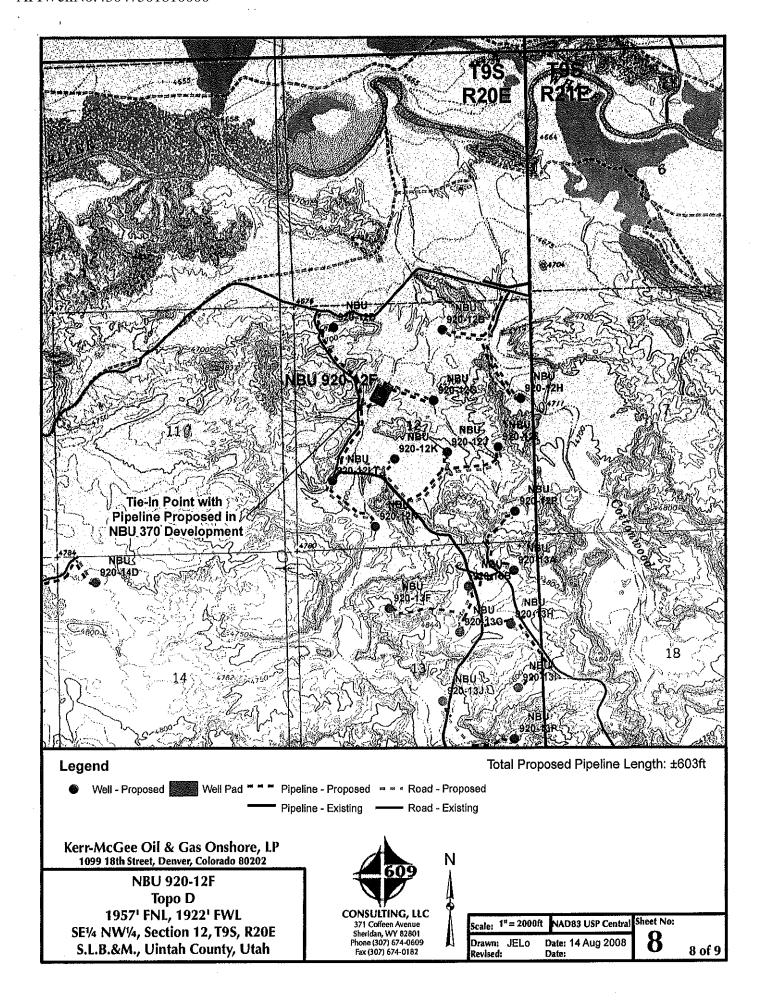
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Scale: 1:100,000	NAD83 USP Central	Sheet No:
Drawn: JELo Revised:	Date: 14 Aug 2008 Date:	5

5 of 9







United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Utah State Office P.O. Box 45155 Salt Lake City, Utah 84145-0155

IN REPLY REFER TO: 3160 (UT-922)

October 14, 2008

Memorandum

To: Assistant District Manager Minerals, Vernal District

From: Michael Coulthard, Petroleum Engineer

Subject: 2008 Plan of Development Natural Buttes Unit

Uintah County, Utah.

Pursuant to email between Diana Whitney, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following wells are planned for calendar year 2008 within the Natural Buttes Unit, Uintah County, Utah.

API # WELL NAME LOCATION

(Proposed PZ WASATCH-MESAVERDE)

 43-047-50179
 NBU
 920-12H
 Sec
 12
 T09S
 R20E
 2170
 FNL
 0279
 FEL

 43-047-50180
 NBU
 920-12G
 Sec
 12
 T09S
 R20E
 2151
 FNL
 2191
 FEL

 43-047-50181
 NBU
 920-12F
 Sec
 12
 T09S
 R20E
 1957
 FNL
 1922
 FWL

 43-047-50185
 NBU
 920-29A
 Sec
 29
 T09S
 R20E
 0616
 FNL
 0927
 FEL

 43-047-50174
 NBU
 920-12B
 Sec
 12
 T09S
 R20E
 0627
 FNL
 1964
 FEL

 43-047-50186
 NBU
 920-29D
 Sec
 29
 T09S
 R20E
 0552
 FNL
 0859
 FWL

(Proposed PZ MESAVERDE)

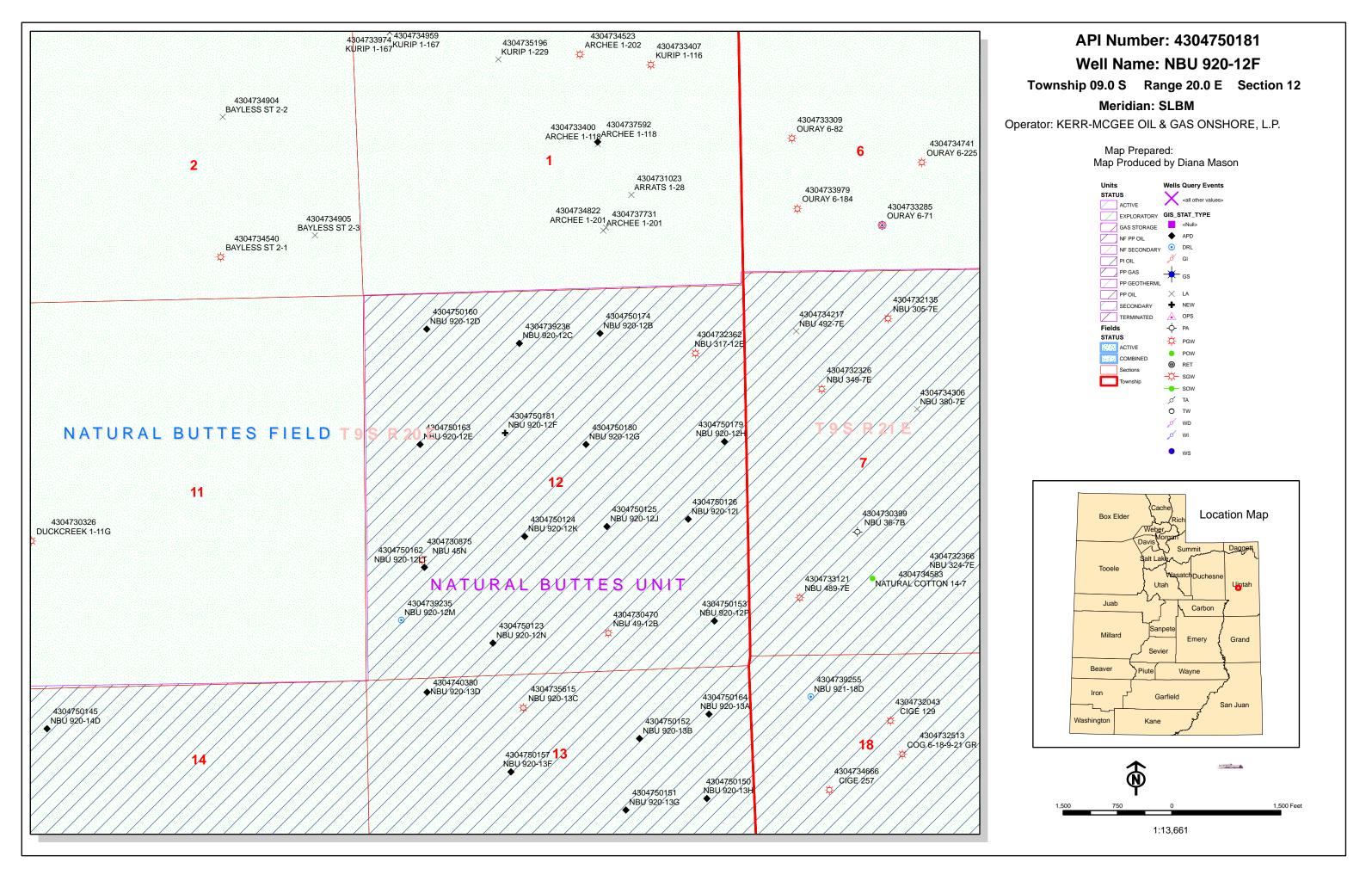
43-047-50162 NBU 920-12LT Sec 12 T09S R20E 1538 FSL 0792 FWL 43-047-50161 NBU 920-24AT Sec 24 T09S R20E 0709 FNL 0704 FEL

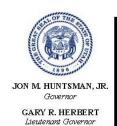
This office has no objection to permitting the wells at this time.

/s/ Michael L. Coulthard

bcc: File - Natural Buttes Unit
 Division of Oil Gas and Mining
 Central Files
 Agr. Sec. Chron
 Fluid Chron

MCoulthard:mc:10-14-08





State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

Permit To Drill

Well Name: NBU 920-12F
API Well Number: 43047501810000
Lease Number: UTU-0144868-B

Surface Owner: INDIAN **Approval Date:** 12/30/2008

Issued to:

KERR-MCGEE OIL & GAS ONSHORE, L.P., P.O. Box 173779, Denver, CO 80217

Authority:

Pursuant to Utah Code Ann. §40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of Cause 173-14.

Duration:

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date

Commingle:

In accordance with Cause No. 173-14, commingling the production from the Wasatch formation and the Mesaverde formation in this well is allowed.

General:

Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

Conditions of Approval:

State approval of this well does not supercede the required federal approval, which must be obtained prior to drilling.

In accordance with the Order in Cause No. 190-5(b) dated October 28, 1982, the operator shall comply with the requirements of Rules R649-3-31 and R649-3-27 pertaining to Designated Oil Shale Areas. Additionally, the operators shall ensure that the surface and or production casing is properly cemented over the entire oil shale section as defined by Rule R649-3-31. The Operator shall report the actual depth the oil shale is encountered to the division.

Notification Requirements:

Notify the Division with 24 hours of spudding the well.

• Contact Carol Daniels at (801) 538-5284.

API Well No: 43047501810000

Notify the Division prior to commencing operations to plug and abandon the well.

• Contact Dustin Doucet at (801) 538-5281 office (801) 733-0983 home

Reporting Requirements:

All required reports, forms and submittals will be promptly filed with the Division, including but not limited to the Entity Action Form (Form 6), Report of Water Encountered During Drilling (Form 7), Weekly Progress Reports for drilling and completion operations, and Sundry Notices and Reports on Wells requesting approval of change of plans or other operational actions.

Approved By:

For Gil Hunt

Associate Director, Oil & Gas

Form 3160-3 (August 1999) RECEIVED VERNAL FIELD OFFICE

OMB No. 1004-0136

Expires November 30, 2000

UNITED STATES

DEPARTMENT OF THE INTERIOR

2000 SEP 18

3. Lease Serial No.

BUREAU OF LAND MAN	JAGEMENT		UTU-014486	
APPLICATION FOR PERMIT TO	DRILL OR REENTER EPT	OF THE INTER!	6 If Indian, Allottee or Trib	
	<u> </u>	II OF LAND ME	7. If Unit or CA Agreement	
1a. Type of Work: X DRILL RE	ENTER	•		
	about the consider states	of opening a court of the desire commence to come thereto an and the	891008900	
The second of th	Cinala Zana V	Multiple Zone	8. Lease Name and Well No	
b. Type of Well: Oil Well X Gas Well Other	Single Zone X	Multiple Zone	NBU 920-1	2F
2. Name of Operator KERR-MCGEE OIL & GAS ONSHORE LP			9. API Well No.	
	3b. Phone No. (include area co	do)	43-047-60/	
3A. Address PO BOX 173779, DENVER, CO 80217-3779	720-929-6		NATURAL BU	TTES
4. Location of Well (Report location clearly and in accordance with	•		11. Sec., T., R., M., or Blk,	
At surface SENW - 1957' FNL, 1922' FWL NAD 83 LAT 4	+0.05193/ LONG 109.61783		SECTION 12, T9S, R	20E, SLB&M
At proposed prod. Zone			12 C	1 12 6
14. Distance in miles and direction from nearest town or post office*		100	12. County or Parish	13. State
APPROXIMATELY 38 +/- MILES F 15. Distance from proposed*	 	17. Spacing Unit de	UINTAH	UTAH
location to nearest property or lease line, ft. 1922'	16. No. of Acres in lease	17. Spacing Onli de		
(Also to nearest drig, unit line, if any)	600		NBU WELL	· ·
18. Distance from proposed location* to nearest well, drilling, completed, applied for on this long. ft. 1500' +/-	19. Proposed Depth	20. BLM/BIA Bond		
applied for, on this lease, it.	10800'		RLB0005239	
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work wi	ll start*	23. Estimated duration	_
4704' KB	ASAP	·	10 DAYS	S '
	24. Attachments		* **	
The following, completed in accordance with the requirements of Ons	shore Oil and Gas Order No. 1, sh	nall be attached to this	form:	
Well plat certified by a registered surveyor.	4. Bond to co	ver the operations un	less covered by an existing bon	d on file (see
2. A Drilling Plan.	Item 20 abo	ove).	•	
3. A Surface Use Plan (if the location is on National Forest System L	ands, the 5. Operator ce	rtification.		
SUPO shall be filed with the appropriate Forest Service Office.			on and/or plans as may be requi	ired by the
Ser e shan se med wan die appropriate i sisse ser me e mies	authorized of		or plans as may so requi	
25. (Signature)	Name (Printed/Typed)		' Date	· · · · · · · · · · · · · · · · · · ·
Lalen White		ALEEN WHITI		9/11/2008
Sr. Regulatory Anglist				
Approved by (Signature)	Name (Printed/Typed)		Date,	1
Stroparis I Howard	Stephanie	I Hours	d = 9/3	2/09
Title Assistant Fleid Manager (Assistant Fleid Manager Lands & Mineral Resources	Office	NAL FIELD C	FIOE	~ · · · · · · · · · · · · · · · · · · ·
Application approval does not warrant or certify that the applicant hole	lds legal or equitable title to those	rights in the subject	lease which would entitle the at	onlicant to conduct
operations thereon.		g		- -
Conditions of approval, if any, are attached.	•			
Title 18 U.S.C. Section 1001and Title 43 U.S.C. Section 1212, make	it a crime for any person knowin	gly and willfully to me	ike to any denartment or agenc	y of the United
States any false, fictitious or fraudulent statements or representations			and to any department of agene,	, s. me sime
			RECEIVA	
and and posted 4-14	ملك	**************************************	RECEIV	
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N v =			-··· VI VIL, GAS & !	MINIMA

NOTICE OF APPROVAL

DIV. OF OIL, GAS & MINING

CONDITIONS OF APPROVAL ATTACHED



UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT VERNAL FIELD OFFICE

VERNAL, UT 84078

(435) 781-440



CONDITIONS OF APPROVAL FOR APPLICATION FOR PERMIT TO DRILL

Company:	Kerr McGee Oil & Gas Onshore LP	Location:	SWNE, Sec. 12, T9S R20E
Well No:	NBU 920-12F	Lease No:	UTU-0144868-B
API No:	43-047-50181	Agreement:	Natural Buttes Unit

OFFICE NUMBER:

170 South 500 East

(435) 781-4400

OFFICE FAX NUMBER:

(435) 781-3420

A COPY OF THESE CONDITIONS SHALL BE FURNISHED TO YOUR FIELD REPRESENTATIVE TO INSURE COMPLIANCE

All lease and/or unit operations are to be conducted in such a manner that full compliance is made with the applicable laws, regulations (43 CFR Part 3160), and this approved Application for Permit to Drill including Surface and Downhole Conditions of Approval. The operator is considered fully responsible for the actions of his subcontractors. A copy of the approved APD must be on location during construction, drilling, and completion operations. This permit is approved for a two (2) year period, or until lease expiration, whichever occurs first. An additional extension, up to two (2) years, may be applied for by sundry notice prior to expiration.

NOTIFICATION REQUIREMENTS

Location Construction (Notify Environmental Scientist)	-	Forty-Eight (48) hours prior to construction of location and access roads.
Location Completion (Notify Environmental Scientist)	-	Prior to moving on the drilling rig.
Spud Notice (Notify Petroleum Engineer)	-	Twenty-Four (24) hours prior to spudding the well.
Casing String & Cementing (Notify Supv. Petroleum Tech.)		Twenty-Four (24) hours prior to running casing and cementing all casing strings to: ut vn opreport@blm.gov.
BOP & Related Equipment Tests (Notify Supv. Petroleum Tech.)	-	Twenty-Four (24) hours prior to initiating pressure tests.
First Production Notice (Notify Petroleum Engineer)	-	Within Five (5) business days after new well begins or production resumes after well has been off production for more than ninety (90) days.

Page 2 of 7 Well: NBU 920-12F 8/25/2009

SURFACE USE PROGRAM CONDITIONS OF APPROVAL (COAs)

- All new and replacement internal combustion gas field engines of less than or equal to 300 designrated horsepower must not emit more than 2 gms of NO_x per horsepower-hour. This requirement does not apply to gas field engines of less than or equal to 40 design-rated horsepower.
- All and replacement internal combustion gas field engines of greater than 300 design rated horsepower must not emit more than 1.0 gms of NO_x per horsepower-hour.
- If there is an active Gilsonite mining operation within 2 miles of the well location, operator shall notify the Gilsonite operator at least 48 hours prior to any blasting during construction.
- If paleontological materials are uncovered during construction, the operator is to immediately stop
 work and contact the Authorized Officer (AO). A determination will be made by the AO as to what
 mitigation may be necessary for the discovered paleontologic material before construction can
 continue.

SITE SPECIFIC CONDITIONS OF APPROVAL

- Additional Stipulations:
- Paint facilities "shadow gray."
- Utilize pit-run/gravel for well pad and access road support.
- Construct surface pipeline according to the BLM's Hydraulic Consideration for Pipeline Crossings of Stream Channels (BLM, 2003) where it crosses the wash.
- Construct access road with a low-water crossing through the wash to accommodate possible flooding. Use pit-run/gravel ant the water crossing.
- If project construction operations are scheduled to occur after December 31, 2009, KMG will conduct additional raptor surveys in accordance with the guidelines specified in the Utah Field Office Guidelines for Raptor Protection for Human and Land Use Disturbances, 2002 and conduct its operations according to applicable seasonal restrictions and spatial offsets.
- If project construction operation are scheduled to occur after April 20, 2010, KMG will conduct additional biological surveys in accordance with the guidelines specified I the USFWS Rare Plant Conservation Measures for Uinta Basin hookless cactus and conduct its operation according to its specifications.

General Conditions of Approval:

- A <u>30'</u> foot corridor right-of-way shall be approved. Upon completion of each pipeline in corridor, they shall be identified and filed with the Ute Tribe.
- A qualified Archaeologist accompanied by a Tribal Technician will monitor trenching construction of pipeline.

Page 3 of 7 Well: NBU 920-12F 8/25/2009

- The Ute Tribe Energy & Minerals Department is to be notified, in writing 48 hours prior to construction of pipeline.
- Construction Notice shall be given to the department on the Ute Tribe workdays, which are Monday through Thursday. The Company understands that they may be responsible for costs incurred by the Ute Tribe after hours.
- The Company shall inform contractors to maintain construction of pipelines within the approved ROW's.
- The Company shall assure the Ute Tribe that "ALL CONTRACTORS, INCLUDING SUB-CONTRACTORS, LEASING CONTRACTORS, AND ETC." have acquired a current and valid Ute Tribal Business License and have "Access Permits" prior to construction, and will have these permits in all vehicles at all times.
- You are hereby notified that working under the "umbrella" of a company does not allow you to be in the field, and can be subject to those fines of the Ute Tribe Severance Tax Ordinance.
- Any deviation of submitted APD's and ROW applications the Companies will notify the Ute Tribe and BIA in writing and will receive written authorization of any such change with appropriate authorization.
- The Company will implement "Safety and Emergency Plan." The Company's safety director will ensure its compliance.
- All Company employees and/or authorized personnel (sub-contractors) in the field will have approved applicable APD's and/or ROW permits/authorizations on their person(s) during all phases of construction.
- All vehicular traffic, personnel movement, construction/restoration operations should be confined to the area examined and approved, and to the existing roadways and/or evaluated access routes.
- All personnel should refrain from collecting artifacts, any paleontological fossils, and from disturbing any significant cultural resources in the area.
- The personnel from the Ute Tribe Energy & Minerals Department should be notified should cultural remains from subsurface deposits be exposed or identified during construction. All construction will cease.
- All mitigative stipulations contained in the Bureau of Indian Affairs Site Specific Environmental Assessment (EA) will be strictly adhered.
- Upon completion of Application for Corridor Right-Way, the company will notify the Ute Tribe Energy & Minerals Department, so that a Tribal Technician can verify Affidavit of Completion.

Page 4 of 7 Well: NBU 920-12F 8/25/2009

DOWNHOLE PROGRAM CONDITIONS OF APPROVAL (COAs)

SITE SPECIFIC DOWNHOLE COAs:

Kerr McGee and their contractors shall strictly adhere to all operating practices in the SOP along
with all Oil and Gas rules and requirements listed in the Code of Federal Regulations and all
Federal Onshore Oil and Gas Orders except where variances have been granted.

All provisions outlined in Onshore Oil & Gas Order #2 Drilling Operations shall be strictly adhered to. The following items are emphasized:

DRILLING/COMPLETION/PRODUCING OPERATING STANDARDS

- The spud date and time shall be reported orally to Vernal Field Office within 24 hours of spudding.
- Notify Vernal Field Office Supervisory Petroleum Engineering Technician at least 24 hours in advance of casing cementing operations and BOPE & casing pressure tests.
- All requirements listed in Onshore Order #2 III. E. Special Drilling Operations are applicable for air drilling of surface hole.
- Blowout prevention equipment (BOPE) shall remain in use until the well is completed or abandoned. Closing unit controls shall remain unobstructed and readily accessible at all times. Choke manifolds shall be located outside of the rig substructure.
- All BOPE components shall be inspected daily and those inspections shall be recorded in the daily
 drilling report. Components shall be operated and tested as required by Onshore Oil & Gas Order
 No. 2 to insure good mechanical working order. All BOPE pressure tests shall be performed by a
 test pump with a chart recorder and <u>NOT</u> by the rig pumps. Test shall be reported in the driller's
 log.
- BOP drills shall be initially conducted by each drilling crew within 24 hours of drilling out from under the surface casing and weekly thereafter as specified in Onshore Oil & Gas Order No. 2.
- Casing pressure tests are required before drilling out from under all casing strings set and cemented in place.
- No aggressive/fresh hard-banded drill pipe shall be used within casing.
- Cement baskets shall not be run on surface casing.
- The operator must report all shows of water or water-bearing sands to the BLM. If flowing water is encountered it must be sampled, analyzed, and a copy of the analyses submitted to the BLM Vernal Field Office.
- The operator must report encounters of all non oil & gas mineral resources (such as Gilsonite, tar sands, oil shale, trona, etc.) to the Vernal Field Office, in writing, within 5 working days of each encounter. Each report shall include the well name/number, well location, date and depth (from KB or GL) of encounter, vertical footage of the encounter and, the name of the person making the report (along with a telephone number) should the BLM need to obtain additional information.

Page 5 of 7 Well: NBU 920-12F 8/25/2009

- A complete set of angular deviation and directional surveys of a directional well will be submitted to the Vernal BLM office engineer within 30 days of the completion of the well.
- While actively drilling, chronologic drilling progress reports shall be filed directly with the BLM, Vernal Field Office on a weekly basis in sundry, letter format or e-mail to the Petroleum Engineers until the well is completed.
- A cement bond log (CBL) will be run from the production casing shoe to the top of cement and shall be utilized to determine the bond quality for the production casing. Submit a field copy of the CBL to this office.
- Please submit an electronic copy of all other logs run on this well in LAS format to UT_VN_Welllogs@BLM.gov. This submission will supersede the requirement for submittal of paper logs to the BLM.
- There shall be no deviation from the proposed drilling, completion, and/or workover program as approved. Safe drilling and operating practices must be observed. Any changes in operation must have prior approval from the BLM Vernal Field Office.

Page 6 of 7 Well: NBU 920-12F 8/25/2009

OPERATING REQUIREMENT REMINDERS:

- All wells, whether drilling, producing, suspended, or abandoned, shall be identified in accordance with 43 CFR 3162.6. There shall be a sign or marker with the name of the operator, lease serial number, well number, and surveyed description of the well.
- In accordance with 43 CFR 3162.4-3, this well shall be reported on the "Monthly Report of Operations" (Oil and Gas Operations Report ((OGOR)) starting with the month in which operations commence and continue each month until the well is physically plugged and abandoned. This report shall be filed in duplicate, directly with the Minerals Management Service, P.O. Box 17110, Denver, Colorado 80217-0110, or call 1-800-525-7922 (303) 231-3650 for reporting information.
- Should the well be successfully completed for production, the BLM Vernal Field office must be
 notified when it is placed in a producing status. Such notification will be by written communication
 and must be received in this office by not later than the fifth business day following the date on
 which the well is placed on production. The notification shall provide, as a minimum, the following
 informational items:
 - o Operator name, address, and telephone number.
 - Well name and number.
 - Well location (¼¼, Sec., Twn, Rng, and P.M.).
 - Date well was placed in a producing status (date of first production for which royalty will be paid).
 - o The nature of the well's production, (i.e., crude oil, or crude oil and casing head gas, or natural gas and entrained liquid hydrocarbons).
 - The Federal or Indian lease prefix and number on which the well is located; otherwise the non-Federal or non-Indian land category, i.e., State or private.
 - Unit agreement and/or participating area name and number, if applicable.
 - o Communitization agreement number, if applicable.
- Any venting or flaring of gas shall be done in accordance with Notice to Lessees (NTL) 4A and needs prior approval from the BLM Vernal Field Office.
- All undesirable events (fires, accidents, blowouts, spills, discharges) as specified in NTL 3A will be reported to the BLM, Vernal Field Office. Major events, as defined in NTL3A, shall be reported verbally within 24 hours, followed by a written report within 15 days. "Other than Major Events" will be reported in writing within 15 days. "Minor Events" will be reported on the Monthly Report of Operations and Production.
- Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (BLM Form 3160-4) shall be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3162.4-1.
 Two copies of all logs run, core descriptions, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, shall be filed on BLM Form 3160-4.

Page 7 of 7 Well: NBU 920-12F 8/25/2009

Submit with the well completion report a geologic report including, at a minimum, formation tops, and a summary and conclusions. Also include deviation surveys, sample descriptions, strip logs, core data, drill stem test data, and results of production tests if performed. Samples (cuttings, fluid, and/or gas) shall be submitted only when requested by the BLM, Vernal Field Office.

- All off-lease storage, off-lease measurement, or commingling on-lease or off-lease, shall have prior written approval from the BLM Vernal Field Office.
- Oil and gas meters shall be calibrated in place prior to any deliveries. The BLM Vernal Field Office
 Petroleum Engineers will be provided with a date and time for the initial meter calibration and all
 future meter proving schedules. A copy of the meter calibration reports shall be submitted to the
 BLM Vernal Field Office. All measurement facilities will conform to the API standards for liquid
 hydrocarbons and the AGA standards for natural gas measurement. All measurement points shall
 be identified as the point of sale or allocation for royalty purposes.
- A schematic facilities diagram as required by Onshore Oil & Gas Order No. 3 shall be submitted to the BLM Vernal Field Office within 30 days of installation or first production, whichever occurs first. All site security regulations as specified in Onshore Oil & Gas Order No. 3 shall be adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed in accordance with Onshore Oil & Gas Order No. 3.
- Any additional construction, reconstruction, or alterations of facilities, including roads, gathering
 lines, batteries, etc., which will result in the disturbance of new ground, shall require the filing of a
 suitable plan and need prior approval of the BLM Vernal Field Office. Emergency approval may be
 obtained orally, but such approval does not waive the written report requirement.
- No location shall be constructed or moved, no well shall be plugged, and no drilling or workover
 equipment shall be removed from a well to be placed in a suspended status without prior approval
 of the BLM Vernal Field Office. If operations are to be suspended for more than 30 days, prior
 approval of the BLM Vernal Field Office shall be obtained and notification given before resumption
 of operations.
- Pursuant to Onshore Oil & Gas Order No. 7, this is authorization for pit disposal of water produced from this well for a period of 90 days from the date of initial production. A permanent disposal method must be approved by this office and in operation prior to the end of this 90-day period. In order to meet this deadline, an application for the proposed permanent disposal method shall be submitted along with any necessary water analyses, as soon as possible, but no later than 45 days after the date of first production. Any method of disposal which has not been approved prior to the end of the authorized 90-day period will be considered as an Incident of Noncompliance and will be grounds for issuing a shut-in order until an acceptable manner for disposing of said water is provided and approved by this office.
- Unless the plugging is to take place immediately upon receipt of oral approval, the Field Office Petroleum Engineers must be notified at least 24 hours in advance of the plugging of the well, in order that a representative may witness plugging operations. If a well is suspended or abandoned, all pits must be fenced immediately until they are backfilled. The "Subsequent Report of Abandonment" (Form BLM 3160-5) must be submitted within 30 days after the actual plugging of the well bore, showing location of plugs, amount of cement in each, and amount of casing left in hole, and the current status of the surface restoration.

	STATE OF UTAH		FORM 9	
	DEPARTMENT OF NATURAL RESOURD DIVISION OF OIL, GAS, AND MI		5.LEASE DESIGNATION AND SERIAL NUMBER: UTU-0144868-B	
SUNDI	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Ute In			
	sals to drill new wells, significantly deepe ugged wells, or to drill horizontal laterals.		7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES	
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 920-12F	
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONS	HORE, L.P.		9. API NUMBER: 43047501810000	
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th S	treet, Suite 600, Denver, CO, 80217 377	PHONE NUMBER: 9 720 929-6007 Ext	9. FIELD and POOL or WILDCAT: NATURAL BUTTES	
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1957 FNL 1922 FWL OTR/OTR, SECTION, TOWNSH	ID PANCE MEDIDIAN.		COUNTY: UINTAH	
	Township: 09.0S Range: 20.0E Meridian	: S	STATE: UTAH	
11.	CK APPROPRIATE BOXES TO INDICA	ATE NATURE OF NOTICE, REPORT,	OR OTHER DATA	
TYPE OF SUBMISSION		TYPE OF ACTION		
	☐ ACIDIZE	ALTER CASING	CASING REPAIR	
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME	
	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE	
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	NEW CONSTRUCTION	
	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK	
✓ SPUD REPORT	☐ PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION	
Date of Spud: 11/9/2009	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON	
	☐ TUBING REPAIR	☐ VENT OR FLARE	WATER DISPOSAL	
DRILLING REPORT Report Date:	☐ WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION	
	☐ WILDCAT WELL DETERMINATION	OTHER	OTHER:	
MIRU PETE MARTIN RAN 14" 36.7# SCH	OMPLETED OPERATIONS. Clearly show all puring BUCKET RIG. DRILLED 20" (IEDULE 10 PIPE. CMT W/28 SECTION ON 11/9/2009 AT 11	CONDUCTOR HOLE TO 40'. IX READY MIX. SPUD WELL 2:00 HRS. Oi		
NAME (PLEASE PRINT) Andy Lytle	PHONE NUMBE 720 929-6100	R TITLE Regulatory Analyst		
SIGNATURE N/A		DATE 11/9/2009		

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING

FN	ITI.	ΓY	Δ	CT	V I	FO	R	M	

Operator:

KERR McGEE OIL & GAS ONSHORE LP

Operator Account Number: N 2995

Address:

P.O. Box 173779

DENI/ED

city DENVER

state CO zip 80217

Phone Number: _(720) 929-6100

Well 1

API Number	Well	Well Name			Twp	Rng	County	
4304750181	4750181 NBU 920-12F SENW		NBU 920-12F SENW	SENW 12		20E	UINTAH	
Action Code	Current Entity Number	New Entity Number	S	pud Da	te	1	y Assignment fective Date	
B	99999	2910	1	1/9/200	9	1	110/09	
ammanta.		400 1101	<u> </u>		A A	·	, ,	

Comments:

MIRU PETE MARTIN BUCKET RIG. MVRD = W5mVD

SPUD WELL LOCATION ON 11/9/2009 AT 12:00 HRS.

Well 2

QQ Sec Twp			Rng County		
Spud Date			Entity Assignment Effective Date		
-	S	Spud Dat	Spud Date		

Well 3

API Number	Number Well Name		QQ Sec Twp		Rng County		
Action Code	Current Entity Number	New Entity Number	S	Spud Date		Entity Assignment Effective Date	
omments:							

ACTION CODES:

- A Establish new entity for new well (single well only)
- B Add new well to existing entity (group or unit well)
- C Re-assign well from one existing entity to another existing entity
- D Re-assign well from one existing entity to a new entity
- E Other (Explain in 'comments' section)

RECEIVED

AND,	Y LYT	LE
Name (Please	Print)

Title

Signature REGULATORY ANALYST

11/9/2009

Date

(5/2000)

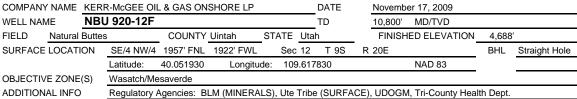
NOV 0 9 2009

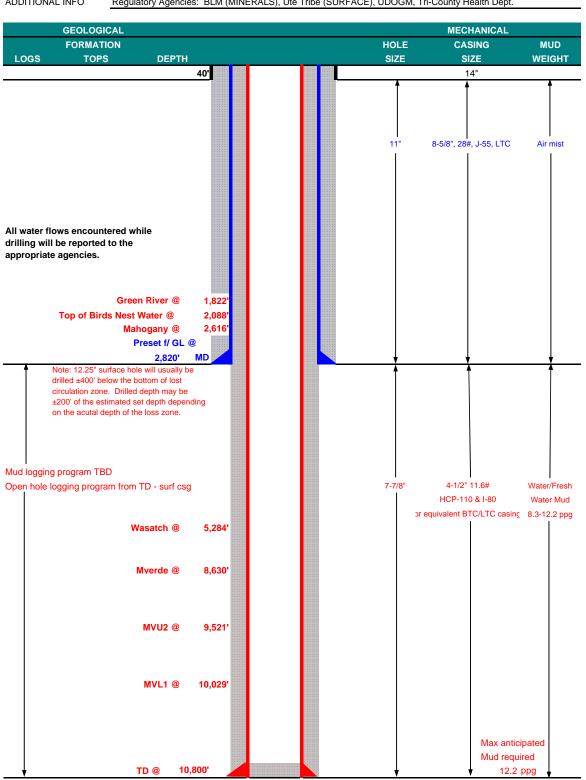
Do not use this form for propobottom-hole depth, reenter plud DRILL form for such proposals 1. TYPE OF WELL Gas Well 2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONS 3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th S 4. LOCATION OF WELL	5.LEASE DESIGNATION AND SERIAL NUMBER: UTU-0144868-B 6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Ute In 7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES 8. WELL NAME and NUMBER: NBU 920-12F 9. API NUMBER: 43047501810000 9. FIELD and POOL or WILDCAT: NATURAL BUTTES COUNTY:								
11.	2 Township: 09.0S Range: 20.0E Meridian: S		STATE: UTAH						
	CK APPROPRIATE BOXES TO INDICATE	<u> </u>	OR OTHER DATA						
TYPE OF SUBMISSION		TYPE OF ACTION							
NOTICE OF INTENT Approximate date work will start:		☐ ALTER CASING ☐ CHANGE TUBING ☐ COMMINGLE PRODUCING FORMATIONS	☐ CHANGE WELL NAME ☐ CONVERT WELL TYPE						
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN [FRACTURE TREAT PLUG AND ABANDON	□ NEW CONSTRUCTION □ PLUG BACK						
SPUD REPORT Date of Spud:	production start or resume	RECLAMATION OF WELL SITE SIDETRACK TO REPAIR WELL	RECOMPLETE DIFFERENT FORMATION TEMPORARY ABANDON						
✓ DRILLING REPORT Report Date: 11/13/2009	☐ TUBING REPAIR ☐ WATER SHUTOFF ☐ WILDCAT WELL DETERMINATION ☐	UVENT OR FLARE SI TA STATUS EXTENSION OTHER	□ WATER DISPOSAL□ APD EXTENSIONOTHER:						
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. MIRU PROPETRO AIR RIG ON 11/10/2009. DRILLED 12-1/4" SURFACE HOLE TO 2830'. RAN 8-5/8" 28# J-55 SURFACE CASING. PUMP 20 BBLS OF GELAccepted by the WATER. LEAD CMT W/350 SX HI FILL @ 11.0 PPG, 3.82 YIELD. TAILED CMTUtah Division of W/250 SX CLASS G PREM LITE @ 15.8 PPG, 1.15 YIELD. DROP PLUG ON FOYI, Gas and Mining AND DISPLACE W/170 BBLS OF 8.3# H20. 10 BBLS OF LEAD TO SURFACE W/650 PSI OF LIFT @ 5 BBLS/MIN. LAND PLUG 900 PSI AND CHECK FLOAT. FLOAT HELD. TOP OUT #1 W/125 SX CLASS G PREM LITE @ 15.8 PPG, 1.15 YIELD DOWN 1", 2 BBLS OF CMT TO SURFACE. CMT FELL BACK APPROX 150'. WAIT 2 HR AND PUMP TOP OUT #2 W/125 SX OF SAME CMT. CMT TO SURFACE AND STAYED. WORT.									
NAME (PLEASE PRINT) Andy Lytle	PHONE NUMBER 720 929-6100	TITLE Regulatory Analyst							
SIGNATURE N/A		DATE 11/13/2009							

	STATE OF UTAH		FORM 9
	DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINI		5.LEASE DESIGNATION AND SERIAL NUMBER: UTU-0144868-B
SUND	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Ute In		
	sals to drill new wells, significantly deepen e ugged wells, or to drill horizontal laterals. Us		7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 920-12F
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONS	HORE, L.P.		9. API NUMBER: 43047501810000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th S	treet, Suite 600, Denver, CO, 80217 3779	PHONE NUMBER: 720 929-6007 Ext	9. FIELD and POOL or WILDCAT: NATURAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1957 FNL 1922 FWL			COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSHI Qtr/Qtr: SENW Section: 12	IP, RANGE, MERIDIAN: Township: 09.0S Range: 20.0E Meridian: S		STATE: UTAH
11. CHE	CK APPROPRIATE BOXES TO INDICATE	NATURE OF NOTICE, REPORT,	OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
	ACIDIZE	ALTER CASING	CASING REPAIR
Approximate date work will start:	✓ CHANGE TO PREVIOUS PLANS	CHANGE TUBING	☐ CHANGE WELL NAME
11/19/2009	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
SUBSEQUENT REPORT	☐ DEEPEN [FRACTURE TREAT	☐ NEW CONSTRUCTION
Date of Work Completion:	OPERATOR CHANGE	PLUG AND ABANDON	☐ PLUG BACK
_	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
SPUD REPORT Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON
	U TUBING REPAIR	VENT OR FLARE	☐ WATER DISPOSAL
DRILLING REPORT	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION
Report Date:	☐ WILDCAT WELL DETERMINATION	OTHER	OTHER:
			'
Kerr-McGee Oil & Gas surface casing size f 9-5/8" TO: 8-5/8".	ompleted operations. Clearly show all pertions South Onshore LP (KMG) respectfull for this well. The surface casing Please see the attached drilling ny questions, please contact the	y requests to change the size is changing FROM: program for additional	Accepted by the Utah Division of
		D:	ate: November 78, 2009
		B	1 John K. Junt
NAME (PLEASE PRINT) Danielle Piernot	PHONE NUMBER 720 929-6156	TITLE Regulatory Analyst	
SIGNATURE N/A		DATE 11/17/2009	



KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM







KERR-McGEE OIL & GAS ONSHORE LP

DRILLING PROGRAM

CASING PROGRAM

								DESIGN FACTORS					
	SIZE	INTERVAL		WT.	GR.	CPLG.	BURST	COLLAPSE	TENSION				
CONDUCTOR	14"	0-40'											
								3,390	1,880	437,000			
SURFACE	8-5/8"	0	to	2820	28.00	J-55	LTC	0.76*	1.42	5.53			
								7,780	6,350	278,000			
PRODUCTION	4-1/2"	0	to	9600	11.60	I-80	BTC	1.74	1.04	2.73			
								10,690	8,650	279,000			
		9600	to	10800	11.60	HCP-110	LTC	2.39	1.26	24.64			

^{*}Burst on suface casing is controlled by fracture gradient as shoe with gas gradient above.

- 1) Max Anticipated Surf. Press.(MASP) (Surf Csg) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac grad x TVD of next csg point))
- 2) MASP (Prod Casing) = Pore Pressure at TD (0.22 psi/ft-partial evac gradient x TD)

(Burst Assumptions: TD = 12.2 ppg) 0.22 psi/ft = gradient for partially evac wellbore

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

MASP 4,353 psi

3) Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

(Burst Assumptions: TD = 12.2 ppg) 0.62 psi/ft = bottomhole gradient

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

MABHP 6,729 psi

CEMENT PROGRAM

	FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE LEAD	500'	Premium cmt + 2% CaCl	215	60%	15.60	1.18
Option 1		+ 0.25 pps flocele				
TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	260	0%	15.60	1.18
		+ 2% CaCl + 0.25 pps flocele				
		Premium cmt + 2% CaCl				
SURFACE		NOTE: If well will circulate water to sur	face, optic	on 2 will be	utilized	
Option 2 LEAD	2,320'	Prem cmt + 16% Gel + 10 pps gilsonite	210	35%	11.00	3.82
		+ 0.25 pps Flocele + 3% salt BWOC				
TAIL	500	Premium cmt + 2% CaCl	150	35%	15.60	1.18
		+ 0.25 pps flocele				
TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.60	1.18
PRODUCTION LEAD	4,780'	Premium Lite II + 0.25 pps celloflake +	390	40%	11.00	3.38
		5 pps gilsonite + 10% gel '+ 1% Retarder				
TAIL	6,020'	50/50 Poz/G + 10% salt + 2% gel	1,470	40%	14.30	1.31
		+ 0.1% R-3				

^{*}Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

FLOAT EQUIPMENT & CENTRALIZERS

SURFACE

Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe.

PRODUCTION

Float shoe, 1 jt, float collar. Centralize first 3 joints & every third joint for a total of 15 bow spring centralizers.

ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

Drop Totco surveys every 2000'. Maximum allowable hole angle is 5 degrees.

Most rigs have PVT Systems for mud monitoring. If no PVT is available, visual monitoring will be utililzed.

DRILLING ENGINEER:		DATE:	
	John Huycke / Emile Goodwin	-	
DRILLING SUPERINTENDENT:		DATE:	
	John Merkel / Lovel Young	·-	

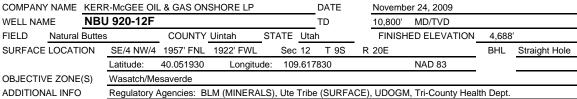
DF = 1.91

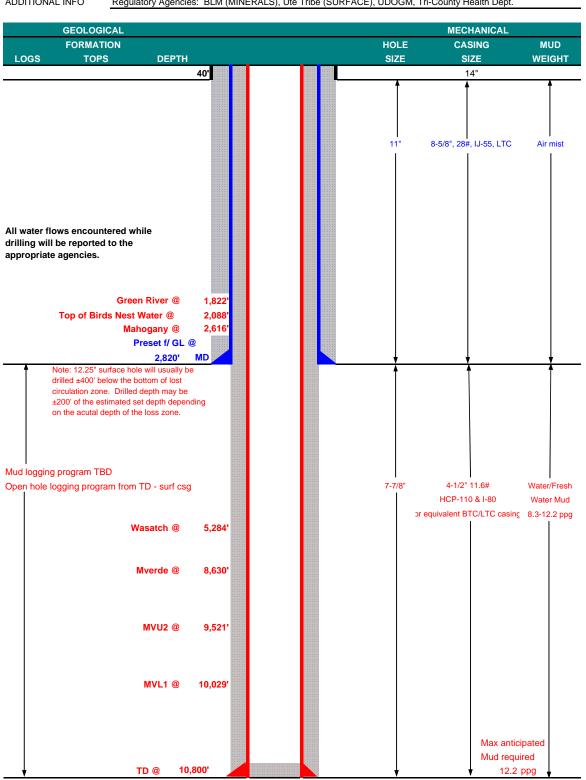
^{*}Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

	STATE OF UTAH		FORM 9			
	DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MININ	G	5.LEASE DESIGNATION AND SERIAL NUMBER: UTU-0144868-B			
	SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current					
bottom-hole depth, reenter plu DRILL form for such proposals	7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES					
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 920-12F			
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONS	9. API NUMBER: 43047501810000					
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th S	9. FIELD and POOL or WILDCAT: NATURAL BUTTES					
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1957 FNL 1922 FWL	COUNTY: UINTAH					
QTR/QTR, SECTION, TOWNSH: Qtr/Qtr: SENW Section: 12	STATE: UTAH					
CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA						
TYPE OF SUBMISSION		TYPE OF ACTION				
	ACIDIZE	ALTER CASING	CASING REPAIR			
V NOTICE OF INTENT Approximate date work will start: 11/20/2000	✓ CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME			
11/30/2009	☐ CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE			
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	■ NEW CONSTRUCTION			
Date of Work completion.	OPERATOR CHANGE	PLUG AND ABANDON	☐ PLUG BACK			
SPUD REPORT	☐ PRODUCTION START OR RESUME ☐	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION			
Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON			
	☐ TUBING REPAIR ☐	VENT OR FLARE	WATER DISPOSAL			
DRILLING REPORT Report Date:	□ WATER SHUTOFF □	SI TA STATUS EXTENSION	APD EXTENSION			
neport Pate.	□ WILDCAT WELL DETERMINATION □	OTHER	OTHER:			
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. Kerr-McGee Oil & Gas Onshore LP (KMG) respectfully requests to change the grade of surface drilling pipe for this well. The surface pipe grade is changing FROM: J-55 LT&C TO: IJ-55 LT&C. Please see the attached drilling program for additional details. If you have any questions, please contact the undersigned. Thank you. Date: November 25, 2009 By:						
NAME (PLEASE PRINT) Danielle Piernot	PHONE NUMBER	TITLE Regulatory Analyst				
SIGNATURE	720 929-6156	DATE				
N/A		11/24/2009				



KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM







KERR-McGEE OIL & GAS ONSHORE LP

DRILLING PROGRAM

CASING PROGRAM

								l l	ESIGN FACT	ORS
	SIZE	INT	ERVA	L	WT.	GR.	CPLG.	BURST	COLLAPSE	TENSION
CONDUCTOR	14"	0-40'								
								3,390	1,880	348,000
SURFACE	8-5/8"	0	to	2820	28.00	IJ-55	LTC	0.76*	1.42	4.41
								7,780	6,350	278,000
PRODUCTION	4-1/2"	0	to	9600	11.60	I-80	BTC	1.74	1.04	2.73
								10,690	8,650	279,000
		9600	to	10800	11.60	HCP-110	LTC	2.39	1.26	24.64

^{*}Burst on suface casing is controlled by fracture gradient as shoe with gas gradient above.

- 1) Max Anticipated Surf. Press.(MASP) (Surf Csg) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac grad x TVD of next csg point))
- 2) MASP (Prod Casing) = Pore Pressure at TD (0.22 psi/ft-partial evac gradient x TD)

(Burst Assumptions: TD = 12.2 ppg) 0.22 psi/ft = gradient for partially evac wellbore

(Collapse Assumption: Fully Evacuated Casing, Max MW)

(Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

MASP 4,353 psi

3) Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

(Burst Assumptions: TD = 12.2 ppg) 0.62 psi/ft = bottomhole gradient

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

MABHP 6,729 psi

CEMENT PROGRAM

	FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE LEAD	500'	Premium cmt + 2% CaCl	215	60%	15.60	1.18
Option 1		+ 0.25 pps flocele				
TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	310	0%	15.60	1.18
		+ 2% CaCl + 0.25 pps flocele				
		Premium cmt + 2% CaCl				
SURFACE		NOTE: If well will circulate water to sur	face, optic	n 2 will be	utilized	
Option 2 LEAD	2,320'	Prem cmt + 16% Gel + 10 pps gilsonite	210	35%	11.00	3.82
		+ 0.25 pps Flocele + 3% salt BWOC				
TAIL	500	Premium cmt + 2% CaCl	150	35%	15.60	1.18
		+ 0.25 pps flocele				
TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.60	1.18
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		5 pps gilsonite + 10% gel '+ 1% Retarder				
TAIL	6,020'	50/50 Poz/G + 10% salt + 2% gel	1,470	40%	14.30	1.31
		+ 0.1% R-3				

^{*}Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

FLOAT EQUIPMENT & CENTRALIZERS

SURFACE

Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe.

PRODUCTION

Float shoe, 1 jt, float collar. Centralize first 3 joints & every third joint for a total of 15 bow spring centralizers.

ADDITIONAL INFORMATION

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BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

Drop Totco surveys every 2000'. Maximum allowable hole angle is 5 degrees.

Most rigs have PVT Systems for mud monitoring. If no PVT is available, visual monitoring will be utililzed.

DRILLING ENGINEER:		DATE:	
	John Huycke / Emile Goodwin		
DRILLING SUPERINTENDENT:		DATE:	
	John Merkel / Lovel Young		

DF = 1.91

^{*}Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
SUBMIT AS EMAIL	Print Form

BLM - Vernal Field Office - Notification Form

Sub Wel Qtr/	rator ANADARKO mitted By BRAD PEDERSEN I Name/Number NBU 920-12F Qtr SE/NW Section 12	Phone Nur Township g	nber <u>435</u> 05 F	-828-0982 Range 20E
Leas	se Serial Number <u>UTU-01448</u> Number <u>43-047-50181</u>	68		
	d Notice – Spud is the initial below a casing string.	spudding o	f the we	ill, not drilling
	Date/Time		АМ 🗌	РМ 🔲
time	Surface Casing Intermediate Casing Production Casing Liner Other			·
	Date/Time	·	AM 🗌	РМ 🗌
BOP V	E Initial BOPE test at surface BOPE test at intermediate 30 day BOPE test Other			
	Date/Time <u>12/23/2010</u>	04:00	AM 🔽	РМ 🗌
Rem	arks <u>TIME IS APPROXAMATE</u>			

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DIV. OF OIL, GAS & MINING

_		
ı	SUBMIT AS EMAIL	Print Form
: ::	the second of th	2 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2

BLM - Vernal Field Office - Notification Form

Ope	rator ANADARKO	Rig Name/# PIONEER 69
Sub	mitted By DALTON KING	Rig Name/# PIONEER 69 Phone Number 435-828-0982
Wel	l Name/Number <u>NBU 920-1</u>	2F
		Township <u>9S</u> Range <u>20E</u>
Leas	se Serial Number <u>UTU-014</u>	4868
API	Number <u>43-047-50181</u>	
	d Notice - Spud is the initia below a casing string.	I spudding of the well, not drilling
	Date/Time	AM [] PM []
<u>Casi</u>		ing run starts, not cementing
N N	Surface Casing Intermediate Casing Production Casing Liner Other	
	Date/Time <u>01/05/2011</u>	10:00 AM 📝 PM 🗌
BOP	E Initial BOPE test at surface BOPE test at intermediate 30 day BOPE test Other	
	Date/Time	AM [] PM []
Rem	arks TIME IS ESTIMATED	

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JAN 0 4 2011

DIV. OF OIL, GAS & MINING

	STATE OF UTAH		FORM 9
	DEPARTMENT OF NATURAL RESOURCE DIVISION OF OIL, GAS, AND MIN		5.LEASE DESIGNATION AND SERIAL NUMBER: UTU-0144868-B
	RY NOTICES AND REPORTS		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Ute In
	sals to drill new wells, significantly deepen ugged wells, or to drill horizontal laterals. U		7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 920-12F
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONS	9. API NUMBER: 43047501810000		
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th S	9. FIELD and POOL or WILDCAT: NATURAL BUTTES		
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1957 FNL 1922 FWL	COUNTY: UINTAH		
QTR/QTR, SECTION, TOWNSH: Qtr/Qtr: SENW Section: 12	STATE: UTAH		
11. CHE	CK APPROPRIATE BOXES TO INDICAT	E NATURE OF NOTICE, REPORT,	OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	☐ NEW CONSTRUCTION
	OPERATOR CHANGE	PLUG AND ABANDON	☐ PLUG BACK
☐ SPUD REPORT	✓ PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON
	☐ TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL
✓ DRILLING REPORT Report Date:	☐ WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION
3/17/2011	☐ WILDCAT WELL DETERMINATION	OTHER	OTHER:
THE SUBJECT WELL	OMPLETED OPERATIONS. Clearly show all per WAS PLACED ON PRODUCTIO DNOLOGICAL WELL HISTORY V THE WELL COMPLETION REF	N ON MARCH 17, 2011 AT WILL BE SUBMITTED WITH PORT. A Oi	•
NAME (PLEASE PRINT) Gina Becker	PHONE NUMBER 720 929-6086	TITLE Regulatory Analyst II	
SIGNATURE N/A		DATE 3/18/2011	

Form 3160-4 (August 2007)

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

FORM APPROVED OMB No. 1004-0137 Expires: July 31, 2010

WELL COMPLETION OR RECOMPLETION REPORT A	AND LO	C
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	VV File	COMP	LETION	JK K	ECU	WPLE	HON	KEP	URI	AND	LOG				ease Serial JTU01448		
la. Type o	f Well Completion	Oil Well	_		<u> </u>		Othe							6. If	Indian, Al	lottee o	r Tribe Name
o. Type o	i Comptetion	Oth	New Well er	ш w	ork Ov	er [Deep	en [_] Plug	g Back	☐ Di	ff. Re	svr.	7. U	nit or CA A	Agreem A	ent Name and No.
2. Name of KERR	f Operator MCGEE OI	L & GAS	ONSHORE	-Mail:	gina.t	Contact pecker@	: GINA	T. BE	CKEF	?				8. L	ease Name	and Wo	ell No.
3. Address		173779			<u> </u>			3a. Ph	one N	o. (includ 9-6086	de area c	ode)			PI Well No		42 047 50494
4. Location	of Well (Re	·		nd in ac	corda	nce with	Federal					**************************************		10. I	Field and P	ool, or	43-047-50181 Exploratory
At surfa	ace SENV	V 1957FN	IL 1922FWI	L 40.05	51925	N Lat, 1	09.617	7832 W	/ Lon				ļ		IATURAL	BUTTI	ES
At top p	orod interval	reported b	elow SEM	V W 19	57FNL	1922F	WL 40.	.05192	5 N La	at, 109.6	317832 \	N Lo	n [0	r Area Se	c 12 T	Block and Survey 9S R20E Mer SLB
At total	depth SE	NW 1957	'FNL 1922F	WL 40	.0519	25 N La	t, 109.	617832	2 W Lo	on					County or P IINTAH	arish	13. State UT
14. Date S ₁ 11/09/2	pudded 2009			ate T.D 1/03/20		hed		16.	D&	Comple A Z 7/2011	ted Ready	to Pro	od.	17. H	Elevations (46	DF, KI 88 GL	3, RT, GL)*
18. Total I	Depth:	MD TVD	1090 1090		19.	Plug Bac	k T.D.:		VID TVD	10	0821 0818	7	20. Dept	th Bri	dge Plug Se		MD IVD
21. Type E	lectric & Otl CHI TRIPLE	ner Mecha	nical Logs R	un (Sul	bmit co	opy of ea	ch)				22. W		ell cored	?	⊠ No	☐ Yes	(Submit analysis)
ACBL-	CHITRIPLE	: COMBC)-KMIE										ST run? onal Surv	vev?	XXI No	☐ Yes	(Submit analysis) (Submit analysis)
23. Casing a	nd Liner Rec	ord (Repo	ort all strings	set in	well)												(Cuchini unaryono)
Hole Size	Size/G	rade	Wt. (#/ft.)		op ID)	Botto: (MD		age Cen Depti			of Sks. & of Ceme		Slurry V (BBL		Cement 7	Гор*	Amount Pulled
20.000		000 STL	36.7	.7 40 28											*****		
12.250		25 IJ-55		4.0											0		
7.875 7.875		.500 I-80 00 P110			0564		561				19	972			-	300	
7.070	4.0	00 - 110	11.0	 	9561	100	365	***************************************				-	************************				
		7.7.7.			***************************************							十					
24. Tubing	Record																
	Depth Set (N		acker Depth	(MD)	Siz	ze D	epth Se	et (MD)	P	acker De	pth (MD)	Size	De	pth Set (MI	D)]	Packer Depth (MD)
2.375 25. Produci	ng Intervals	9997		-	<u> </u>		26 Per	foration	. Poss	nd		L_					
	ormation		Тор	T	Bot	ttom	20.10			Interval		T	Size		o. Holes	<u> </u>	D 50.
A)		ATCH		7904	- 4201	8448	***************************************	1 0110	raicu .		O 8448		0.36			OPEN	Perf. Status
В)	MESAVE	RDE		8536		10462	·				0 10462		0.36			OPEN	
C)																	
D)	acture, Treat	ment Cor	nant Causage	. Pta	····							<u> </u>	****	1_			
	Depth Interva		nent Squeeze	, Etc.	·	·····			A		3 77	C3.C.	• •	-			
			462 PUMP 9	,681 BE	BLS SL	ICK H20	& 363,2	297 LBS			d Type o	i Mat	eriai	*****			
									***********							***************************************	
						····						***************************************					
28 Producti	ion - Interval	Α										*****					
Date First	Test	Hours	Test	Oil	Ī	Gas	Water		Oil Gra	vitu	Gas		D,	mductio	n Method		
Produced 03/17/2011	Date 03/24/2011	Tested 24	Production	BBL	N	MCF	BBL		Corr. A			vity	1.	ioaucno			
Choke	Tbg. Press.	Csg.	24 Hr.	O.0		1900.0 Bas	Water	40.0	Gas:Oi	1	WA	ll Statu		· · · · · · · · · · · · · · · · · · ·	FLOW	S FRO	M WELL
Size 20/64	Flwg. 1498 SI		Rate	BBL 0		ACF 1900	BBL		Ratio	-	""						
	tion - Interva			L		1900		140	L			PG	/V				
Date First	Test	Hours	Test	Oil		Gas	Water		Oil Gra		Gas		Pr	oductio	n Method		
roduced	Date	Tested	Production	BBL	l N	ACF	BBL		Corr. A	PI	Gra	vity					
Choke lize	Tbg. Press.	Csg.	24 Hr.	Oil		ias	Water	· · · · · · · · · · · · · · · · · · ·	Gas:Oil	<u> </u>	We	l Status	RE	ECEIVE			
	Flwg. SI	Press.	Rate	BBL	^^	<i>I</i> CF	BBL		Ratio			;	14	NY (3 72.	(

28b. Proc	luction - Interv	al C		***************************************								
Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gra	vity	Production Method		
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Wel	li Status		(411)	
28c. Proc	luction - Interv	al D		L								
Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Grav		Production Method	·	
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Wei	Il Status			
29. Dispo	sition of Gas	Sold, used	d for fuel, vent	eđ, etc.)			L	نـــيل.				
30. Sumr Show tests,	nary of Porous	zones of	nclude Aquife porosity and co I tested, cushic	ontents there	eof: Cored tool oper	l intervals and al n, flowing and sl	l drill-stem hut-in pressure	es	31. For	mation (Log) Marker	\$	
	Formation		Top	Bottom		Descriptions	s, Contents, etc	c.		Name		Тор
Attac	EST NY H RDE	ronologic	1790 2072 2477 5286 8501	8501 10904 dure): y & final su		empletion chror	no details					Meas. Depth
	enclosed attacectrical/Mechan		s (1 full set rec	q'd.)		2. Geologic Re	eport	3.	DST Rep	ort 4	Directiona	1 Survey
			g and cement v			6. Core Analys	_		Other:	 -		Jui voy
24 Th	ا الشاهدة وما	than C		. 1: 0		1						
34. I nere	by certify that	ine ioreg	Electro	onic Submi:	sion #107	aplete and correct 7031 Verified by OIL & GAS O	v the BLM W	ell Inforn	nation Syst	records (see attached tem.	instruction	s):
Name	(please print) M	GINA T.	BECKER	***************************************	***		Title R	EGULAT	ORY ANA	LYST		
Signat		(Electron	nic Sumission	ny C			Date <u>0</u> 4	4/25/2011	<u> </u>			
Title 18 U	S.C. Section ited States any	1001 and false, fict	Title 43 U.S.C	. Section 12 lent stateme	12, make nts or repr	it a crime for an resentations as to	y person know o any matter w	vingly and vithin its ju	willfully to	make to any departr	nent or age	ncy

Operation Summary Report

Well: NBU 920	-12F			Spud Co	onductor	: 11/9/2	:009	Spud Date: 11/10/2009
Project: UTAH-	-UINTA	1		Site: NB	U 920-1	2F	· · · · · · · · · · · · · · · · · · ·	Rig Name No: PIONEER 69/69, PROPETRO/
Event: DRILLIN	VG			Start Da	te: 11/8/	2009		End Date: 1/6/2011
Active Datum: Level)	RKB @4	1,722.00ft (a	above Mear	n Sea	UWI: S	E/NW/0	0/9/S/20/E	E/12/0/0/26/PM/N/1,957.00/W/0/1,922.00/0/0
Date	Sta	Time art-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From Operation (ft)
11/10/2009		- 18:00	3.00	MIRU	01	В	Р	MOVE RIG IN, DRESS CONDUCTOR, INSTALL AIR BOWL, INSTALL BOWIE LINE, RIG UP RIG, RIG UP PUMPS. P/U AIR HAMMER
		- 20:00	2.00	MIRU	07	Α	P	RIG SERVICE, LUBRICATE RIG.
		- 21:00	1.00	DRLSUR	02	Α	Р	AIR SPUD 11/10/2009 20:00. AIR HAMMER 44'-120'.
		- 23:00	2.00	DRLSUR	06	Α	P	LD AIR HAMMER AND P/U MUD MOTOR SN 8049. (3RD RUN) MAKE UP 12-1/4" HC507Z SN 7008622 (1ST RUN). P/U 8" INSTALL AIR BOWL RUBBER.
		- 0:00	1.00	DRLSUR	02	В	Р	DRILL 120'-210'. WOB 5-15KK RPM 45, MOTOR RPM 104, GPM 650, ON/OFF PSI-900/1200, UP/DOWN/ROT= 25/25/25
11/11/2009		- 16:00	16.00	DRLSUR	02	В	P	DRILL 210'-1900' (1690', 105'/HR) WOB 20K RPM 45, MOTOR RPM 104, GPM 650, ON/OFF PSI- 1400/1700 UP/DOWN/ROT=68/66/67 FULL CIRC.W NO LOSS. CIRC RESERVE. USE AIR TO HELP CLEAN HOLE ONLY.
		- 16:30	0.50	DRLSUR	10	Α	Р	CLEAN HOLE W/ AIR AND SURVEY W/ WIRELINE. 1840'= 1 DEGREE. INC ONLY
	16:30	- 0:00	7.50	DRLSUR	02	В	Р	DRILL 1900'-2500' (600', 80'/HR) WOB 22K, RPM 45, MOTOR RPM 104, GPM 650, ON/OFF PSI 1500/1800 UP/DOWN/ROT 70/68/69 FULL CIRC. WITH NO LOSS. NO WATER GAIN, CIRC
11/12/2009		- 4:30	4.50	DRLSUR	02	В	Р	RESERVE. AIRATE TO CLEAN HOLE. DRILL 2500'-2830' (330', 73'/HR) WOB 22K, RPM 45, MOTOR RPM 104, GPM 650, ON/OFF PSI 1500/1800 UP/DOWN/ROT 72/69/70 FULL CIRC. WITH NO LOSS. NO WATER GAIN. CIRC RESERVE. AIRATE TO CLEAN HOLE.
		- 5:30	1.00	CSG	05	F	P	CLEAN HOLE W/ AIR. FULL RETURNS WHILE CIRC. RESERVE PIT.
		- 6:00	0.50	DRLSUR	10	Α	Р	WIRELINE SURVEY 2710'= 1.5 DEGREES INC. ONLY.
		- 10:00	4.00	CSG	06	D	P	LDDS, LD BHA.
	10:00	- 13:00	3.00	CSG	12	С	P	RUN 65 JTS OF 8-5/8" 28# J-55 CSG W/ LTC 8RD THREADS AND LAND @ 2788' KB, BAFFLE PLATE RAN IN TOP OF SHOE JT 2745' KB. FILL PIPE @ 1000' AND 2000'. RUN 75' OF 1" UNABLE TO RUN ANY MORE.
		- 13:30	0.50	RDMO	01	E	Р	RIG DOWN RIG AND MOVE OUT. ROAD RIG TO NBU 1022-4HT
	13:30	- 17:00	3.50	CSG	12	E	P	TEST LINES TO 2000' PSI, PUMP 45 BBLS OF H20, PUMP 20 BBLS OF GEL WATER. PUMP 350 (232 BBLS) SX OF 11#, 3.82 YD, 23 GAL SX HI FILL LEAD CEMENT. PUMP 250 SX (51.2 BBLS) OF 15.8#, 1.15 YD, 5 GAL/SK TAIL CEMENT, DROP PLUG ON FLY AND DISPLACE W/ 170 BBLS OF 8.3# H20, 10 BBLS OF LEAD TO SURFACE W/ 650 PSI OF LIFT @ 5 BBLS/MIN. LAND PLUG 900 PSI AND CHECK FLOAT. FLOAT HELD. PUMP 125 SX (25.6 BBLS) OF 4% CALC 15.8# 1.15 YD, 5 GAL/SK CEMENT DOWN 1" 2 BBLS OF CEMENT TO SURFACE. CEMENT FELL BACK APPROX 150'. WAIT 2 HR AND PUMP 125 SX (25.6 BBLS) OF SAME CEMENT. CEMENT TO SUFACE AND
12/21/2010	18:00	- 0:00	6.00	RDMO	01	E	Р	STAYED. RDRT, L/D KELLY ,R/D FLOOR, PUMPS ,PITS, STEAM,SOME ELECTRICAL,WATER, GAS BUSTER, FLARE LINES, MISC

Operation Summary Report

Well: NBU 920-12F Spud Conductor: 11/9/2009 Spud Date: 11/10/2009 Project: UTAH-UINTAH Site: NBU 920-12F Rig Name No: PIONEER 69/69, PROPETRO/ **Event: DRILLING** Start Date: 11/8/2009 End Date: 1/6/2011 Active Datum: RKB @4,722.00ft (above Mean Sea UWI: SE/NW/0/9/S/20/E/12/0/0/26/PM/N/1,957.00/W/0/1,922.00/0/0 Level) Date Time Duration Phase Code Sub P/U MD From Operation Start-End (hr) Code (ft) 0:00 - 7:00 12/22/2010 7.00 **RDMO** 01 P Ε **RDRT** 7:00 - 17:30 10.50 MIRU Α P 01 SAFETY MEETING w/ ALL PERSONEL ON LOCATION. RIG DOWN LOADED OUT THE EQUIPMENT AND MOVED TO THE NBU 920-12F. WE HAD 5 TRUCKS AND 1 FORKLIFT. WE HAD PROBLEMS LOWERING THE DERRICK AND SUB THE HYDRAULIC PUMP WAS NOT OPERATING CORRECTLY. ALSO HAD A TRUCK FROM MOUNTAIN WEST BRAKE DOWN BEFORE ARRIVING ON LOCATION TO MOVE THE CAMPS. WEST ROC MOVED THE CAMPS, TRUCKS ARRIVED @ 6:30 AM AND THE CRANE ARRIVED @ 07:00. TRUCKS LEFT @ 17:30. THE CRANE SHUT DOWN @ SUNDOWN. WE WILL HAVE TO RAISE THE DERRICK AT FIRST LIGHT. THE RIG LOADS ARE ALL SET IN. 17:30 - 0:00 6.50 MIRU 01 В P RIG UP ELCTRIC, BOILER, FLARE LINES, BACKYARD. 0:00 - 7:00 12/23/2010 RU PITS, BOILER, AIR LINES, TARPS, FLARE 7.00 MIRU 01 В Р 7:00 - 15:30 8.50 MIRU R P 01 RAISE THE DERRICK, SCOPE UP THE DERRICK, RU THE FLOOR, PU/ MAKE UP THE KELLY, rIG UP MISC. GROUND EQUIP. CRANE CREW ARRIVED @ 07:00 AND LEFT @ 10:00 15:30 - 17:30 2.00 DRLPRO 14 Α Р NU THE BOP AND CHOKE MANIFOLD 17:30 - 20:00 2.50 **DRLPRO** 15 Α P SAFETY MEETING W/ QUICK TEST, TEST FLOOR VALVES, UPPER & LOWER KELLY VALVES, PIPE & BLIND RAMS, INSIDE & OUT SIDE BOP VALVES HCR VALVE, CHOKE MANIFOLD, & KILL LINE 250/5 MIN, 5000/ 10 MIN, ANNULAR 250/5 MIN, 2500/ 10 MIN, CASING 1500 F/ 30 MIN, R/D TESTER 20:00 - 21:30 1.50 **DRLPRO** Р 14 Α INSTALL WEAR BUSHING, FINISH THE FLOWLINE, STRAP THE BHA 21:30 - 0:00 2.50 DRLPRO 06 Α Р RU THE LAYDOWN TRUCK, PU THE BHA SCRIBE IT AND PU DP 12/24/2010 0:00 - 3:30 3.50 **DRLPRO** 06 Α P PU DP TO 2550'. RD KIMSEY. 3:30 - 4:30 1.00 **DRLPRO** 14 В Ρ INSTALLED THE KELLY DRIVERS AND THE ROTATING RUBBER. - 7:30 4:30 3.00 DRLPRO 02 F Р TAGGED CEMENT @ 2663' DRILLED CEMENT AND FLOAT EQUIP. 7:30 - 17:00 9.50 **DRLPRO** 02 В Р DRILL F/ 2844'-3833', 990'/9.5HR 104.2'/HR', 20-24K WOB, RPM/50-55, MMRPM/91, SPM 120, GPM 454, UP/SO/ROT 95/90/93, ON/OFF 1480/940, DIFF 400-550, SLID 30' @ 360 AZM. STARTED MUD UP @ 3100' VIS/34 WT/9.5 17:00 - 17:30 0.50 **DRLPRO** 07 Α RIG SERVICE 17:30 - 0:00 6.50 **DRLPRO** 02 В P DRILL F/ 3833'-4442', 609'/6.5HR 93.7'/HR', 20-24K WOB, RPM/50-55, MMRPM/91, SPM 120, GPM 454. UP/SO/ROT 120/95/102, ON/OFF 1525/1000, DIFF 400-550, SLID 25' @ 360 AZM. VIS/32 WT/9,9 12/25/2010 0:00 - 6:00 6.00 **DRLPRO** 02 В Ρ DRILL F/ 4442'-5034', 592'/6HR 98.7'/HR', 20-24K WOB, RPM/50-55, MMRPM/91, SPM 120, GPM 454, UP/SO/ROT 125/100/110, ON/OFF 2080/1450, DIFF 400-625, SLID 25' @ 360 AZM. VIS/32 WT/10.4 6:00 - 11:00 5.00 **DRLPRO** 02 В P DRILL F/ 5034'-5603', 569'/5HR 113.8'/HR', 20-24K WOB, RPM/50-55, MMRPM/91, SPM 120, GPM 454, UP/SO/ROT 130/110/120, ON/OFF 2100/1475, DIFF 400-550, SLID 15' @ 360 AZM. VIS/37 WT/10.4

4/14/2011

11:40:18AM

11:00 - 11:30

0.50

DRLPRO

07

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RIG SERVICE

Operation Summary Report

Well: NBU 920-	·12F			Spud Co	onductor	: 11/9/200)9	Spud Date: 11/10/2009				
Project: UTAH-	UINTAH	l		Site: NB	U 920-1	2F		Rig Name No: PIONEER 69/69, PROPETRO/				
Event: DRILLIN	IG			Start Dat	te: 11/8/	2009		End Date: 1/6/2011				
Active Datum: F Level)	RKB @4	,722.00ft (a	above Mear	n Sea	UWI: S	E/NW/0/9	9/S/20/	/E/12/0/0/26/PM/N/1,957.00/W/0/1,922.00/0/0				
Date	Sta	Γime ιrt-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From Operation (ft)				
12/26/2010		- 0:00 - 6:00	12.50	DRLPRO	02	В	P	DRILL F/ 5603'-6520', 917'/5HR 73.4'/HR', 20-24K WOB, RPM/50-55, MMRPM/91, SPM 120, GPM 454, UP/SO/ROT 135/125/130, ON/OFF 2150/1550, DIFF 400-600, VIS/37 WT/10.6				
12/20/2010			6.00	DRLPRO	02	В	Р	DRILL F/ 6520'-6994', 474'/6HR 79'/HR', 20-24K WOB, RPM/50-55, MMRPM/91, SPM 120, GPM 454, UP/SO/ROT 145/135/140, ON/OFF 2150/1570, DIFF 400-600, VIS/37 WT/10.7				
		- 14:00	8.00	DRLPRO	02	В	P	DRILL F/ 6994'-7500', 506'/8HR 63.3'/HR', 20-24K WOB, RPM/50-55, MMRPM/91, SPM 120, GPM 454, UP/SO/ROT 155/140/150, ON/OFF 2275/1700, DIFF 400-600, VIS/37 WT/11.0 RAISING WEIGHT FOR SLOUGHING				
		- 14:30	0.50	DRLPRO	07	Α	Ρ	RIG SERVICE				
12/27/2010		- 0:00 - 5:30	9.50 5.50	DRLPRO	02 02	В	P P	DRILL F/ 7500'-7840', 340'/9.5HR 35.8'/HR',SLID 9' @ 340 AZM., 20-24K WOB, RPM/50-55, MMRPM/91, SPM 120, GPM 454, UP/SO/ROT 160/145/155, ON/OFF 2450/1760, DIFF 500-700, VIS/39 WT/11.3 DRILL F/ 7840'-7990', 150'/5.5HR 27.3'/HR', 20-24K				
								WOB, RPM/50-55, MMRPM/91, SPM 120, GPM 454, UP/SO/ROT 160/145/155, ON/OFF 2150/1760, DIFF 300-450, VIS/40 WT/11.5				
		- 6:00	0.50	DRLPRO	22	0	P 	MAINTANANCE/ ADJ. THE BRAKES				
		- 18:00 - 0:00	12.00 6.00	DRLPRO	02	В	P P	DRILL F/ 7990'-8332', 342'/12HR 28.5'/HR, 20-24K WOB, RPM/50-55, MMRPM/91, SPM 120, GPM 454, UP/SO/ROT 165/155/150, ON/OFF 2080/1780, DIFF 250-450, VIS/40 WT/11.8 LCM 1% DRILL F/ 8332'-8480', 148'/6HR 24.7'/HR,18-24K				
12/28/2010	0:00	- 6:00	6.00	DRLPRO	02	В	P	WOB, RPM/50-55, MMRPM/91, SPM 120/115, GPM 454/436, UP/SO/ROT 173/150/163, ON/OFF 2100/1800, DIFF 250-400, VIS/40 WT/11.9 LCM 3% DRILL F/ 8480'-8607', 127'/6HR 21.2'/HR,18-24K				
	6:00	- 14:00	8.00	DDI DDO	00	Б	Б	WOB, RPM/50-55, MMRPM/87, SPM 120/115, GPM 454/436, UP/SO/ROT 173/150/163, ON/OFF 2100/1800, DIFF 250-400, VIS/42 WT/11.9 LCM 3%				
			6.00	DRLPRO	02	В	P	DRILL F/ 8607'-8828', 221'/8HR 27.6'/HR,18-24K WOB, RPM/50-55, MMRPM/87, SPM 120/115, GPM 436, UP/SO/ROT 173/150/163, ON/OFF 2300/1850, DIFF 250-400, VIS/44 WT/12.0 LCM 3%				
		- 14:30	0.50	DRLPRO	07	Α	P	RIG SERVICE				
		- 16:00	1.50	DRLPRO	02	В	P	DRILL F/ 8828'-8860', 32'/1.5HR 21.3'/HR,18-24K WOB, RPM/50-55, MMRPM/91, SPM 120/115, GPM 436, UP/SO/ROT 185/155/168, ON/OFF 2300/1850, DIFF 250-400, VIS/40 WT/12.0 LCM 3%				
		- 16:30	0.50	DRLPRO	05	C	P -	CIRC.PUMPED A PILL				
		- 18:30	2.00	DRLPRO	06	A	P	TOH FOR BIT				
		- 19:30	1.00	DRLPRO	22	Α .	X	WE HIT A TIGHT SPOT @ 5200' IT PULLED 40 K OVER. WORKING TIGHT PIPE				
	19.30	- 0:00	4.50	DRLPRO	22	Α	X	BROKE OFF THE CONNECTION (20' ABOVE THE FLOOR). WE SLACKED ALL THE WEIGHT OFF WHILE GETTING EQUIP TO CIRC. AND THE PIPE FELL FREE AFTER 20 MIN. SLACKED OFF TO THE FLOOR PU THE KELLY CIRCULATED. WE WERE CIRC. THE HOLE TO BACK REAM AND CLEAN UP THE HOLE. WE PULLED INTO THE TIGHT SPOT W/ 25K OVER AND BECAME STUCK AGAIN. WORKED THE PIPE DOWN W/ MINOR SUCESS. HAD TO BRAKE THE KELLY ABOVE THE FLOOR TO STAND IT BACK.				

4/14/2011

11:40:18AM

Operation Summary Report

Well: NBU 920- Project: UTAH-			Spud Co Site: NB			009	Spud Date: 11/10/2009
							Rig Name No: PIONEER 69/69, PROPETRO/
Event: DRILLIN		. 1 . 3.4	Start Da			/2 /2 /2 2	End Date: 1/6/2011
Level)	RKB @4,722.00ft (above Mear	Sea	UWI: S	E/NW/0	/9/S/20/E	//12/0/0/26/PM/N/1,957.00/W/0/1,922.00/0/0
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From Operation (ft)
12/29/2010	0:00 - 3:00	3.00	DRLPRO	22	Α	X	5190' DEPTH PU THE SUFACE JARS AND ATTEMPTED TO USE THEM. THE JARS WERE INOPERABLE. RD THE JARS. THE BREAK WAS 20' OFF OF THE FLOOR.
	3:00 - 6:00	3.00	DRLPRO	22	Α	X	WORKING THE PIPE AND CIRCULATING. BROUGHT THE MUD WT TO 12.4 46/VIS 4% LCM WHILE WAITING FOR ANOTHER SET OF JARS
	6:00 - 14:00	8.00	DRLPRO	22	Α	Х	PU NEW SURFACE JARS. JARING AND WORKING PIPE FROM 5190' TO 5069'. USED THE JARS TO LD 6 MORE SINGLES THAT WERE STILL STICKY.
	14:00 - 14:30	0.50	DRLPRO	23		X	INSPECTED THE DERRICK AND PREPARED TO TOH
	14:30 - 16:00 16:00 - 20:00	1.50	DRLPRO	22	A	X	WE HAD TO PICK THE JARS BACK UP AND LD 5 MORE SINGLES TO 4740'
	20:00 - 0:00	4.00 4.00	DRLPRO	06 06	A A	P P	TOH AND XO A MUD MOTOR AND BIT. CHECKED THE MWD TOOLS (TESTED OK)
12/30/2010	0:00 - 2:30	2.50	DRLPRO	09	A	P	MADE UP THE BHA SCRIBED THE ASSEMBLY AND TIH. CUT AND SLIPPED 110' OF DRILLING LINE.
12/00/2010	2:30 - 3:30	1.00	DRLPRO	06	A	P	
	3:30 - 6:30	3.00	DRLPRO	03	A	X	TIH TO 4873' WASHED AND REAMED F/ 4873' TO 5291' STICKY
	6:30 - 8:00	1.50	DRLPRO	06	Α	Х	SPOTS. SET THE KELLY BACK AND TIH TO 6960'
	8:00 - 10:00	2.00	DRLPRO	03	A	X	BROKE DOWN 3 STANDS OF DP AND REAMED 4 JTS F/6960' TO 7030'. BRIDGES SET THE KELLY BACK
	10:00 - 11:00	1.00	DRLPRO	06	Α	Р	TIH TO BOTTOM
	11:00 - 11:30	0.50	DRLPRO	03	D	P	WASH AND REAM 60' TO BOTTOM
	11:30 - 16:30 16:30 - 17:00	5.00	DRLPRO	02	В	P P	DRILL F/ 8860'-9018', 158'/5HR 31.6'/HR,18-24K WOB, RPM/50-55, MMRPM/70, SPM/115, GPM 436, UP/SO/ROT 180/160/174, ON/OFF 2300/2000, DIFF 250-400, VIS/40 WT/12.4 LCM/ 3% RIG SERVICE
	17:00 - 0:00	7.00	DRLPRO	02	В	P	DRILL F/ 9018'-9252', 234'/7HR 33.4'/HR,18-24K
12/31/2010	0:00 - 6:00	6.00	DRLPRO	02	В	P	WOB, RPM/50-55, MMRPM/70, SPM/115, GPM 436, UP/SO/ROT 180/160/174, ON/OFF 2300/2010, DIFF 250-400, VIS/40 WT/12.5 LCM/ 4% DRILL F/ 9252'-9492', 240'/6HR, 40'/HR,18-24K WOB, RPM/50-55, MMRPM/70, SPM/115, GPM 436, UP/SO/ROT 180/165/177, ON/OFF 2350/2010, DIFF 250-400, VIS/40 WT/12.5 LCM/ 4%
	6:00 - 16:30	10.50	DRLPRO	02	В	P	DRILL F/ 9492'-9871', 379'/10.5HR,36.1'/HR, 18-24K WOB, RPM/50-55, MMRPM/70, SPM/115, GPM 436, UP/SO/ROT 188/175/182, ON/OFF 2435/2005, DIFF 300-450, VIS/40 WT/12.5 LCM/ 4%
	16:30 - 17:00	0.50	DRLPRO	07	Α	Р	RIG SERVICE
1/1/2011	0:00 - 9:00	7.00 9.00	DRLPRO DRLPRO	02	В	P P	DRILL F/ 9871'-10092', 221'/7HR, 31.6'/HR, 18-24K WOB, RPM/50-55, MMRPM/70, SPM/115, GPM 436, UP/SO/ROT 189/170/184, ON/OFF 2350/2050, DIFF 250-400, VIS/43 WT/12.5 LCM/ 4% DRILL F/ -10092'-10272', 180'/9HR, 20'/HR, 18-24K WOB, RPM/50-55, MMRPM/70, SPM/115, GPM 436,
	9:00 - 12:30	3.50	DRLPRO	oe.	Α	D	UP/SO/ROT 189/170/184, ON/OFF 2350/2050, DIFF 250-400, VIS/43 WT/12.5 LCM/ 4%
	12:30 - 13:30			06	A	P	TOH TO 6670'
	13:30 - 20:00	1.00 6.50	DRLPRO DRLPRO	03 06	A A	X P	WORK A TIGHT SPOT. PU THE KELLY AND BACK REAM THROUGH IT. SET THE KELLY BACK AND TOH. LD THE MWD
		3.00	IV				TOOLS,

Operation Summary Report

Well: NBU 920-12F Spud Conductor: 11/9/2009 Spud Date: 11/10/2009 Project: UTAH-UINTAH Site: NBU 920-12F Rig Name No: PIONEER 69/69, PROPETRO/ Event: DRILLING Start Date: 11/8/2009 End Date: 1/6/2011

Active Datum: F .evel)	RKB @4	I,722.00ft (above Mean	Sea	UWI: SE/NW/0/9/S/20/E/12/0/0/26/PM/N/1,957.00/W/0/1,922.00/0/0									
Date	Sta	Time art-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation					
		- 0:00	4.00	DRLPRO	06	Α	Р	The second secon	CHANGED OUT THE MM AND BIT.TIH TO THE CASING SHOE. 2840'					
1/2/2011		- 2:00	2.00	DRLPRO	80	Α	Z		FROZEN AIR AND FLUID LINES					
		- 2:30	0.50	DRLPRO	05	Α	Р		FILL THE DP @ THE SHOE					
		- 4:30	2.00	DRLPRO	06	Α	Р		TIH TO 6797' FILLED DP @ 5900'					
		- 7:30	3.00	DRLPRO	03	Α	S		PU THE KELLY WASH/REAM TIGHT SPOT FROM 6797'-6870'. DRAIN UP THE KELLY AND HANG IT BACK.					
		- 12:00	4.50	DRLPRO	06	Α	Р		TIH TO BOTTOM, PU THE KELLY AND BREAK CIRCULATION					
		- 12:30	0.50	DRLPRO	03	D	P		WASH 60' TO BOTTOM					
		- 17:00 - 17:30	4.50 0.50	DRLPRO	02	B A	P		DRILL F/ 10272'-10456', 184'/4.5HR,40.9'/HR, 18-24K WOB, RPM/50-55, MMRPM/70, SPM/115, GPM 436, UP/SO/ROT 195/175/183, ON/OFF 2400/2050, DIFF 250-400, VIS/43 WT/12.5 LCM/ 5% RIG SERVICE					
		- 0:00	6.50	DRLPRO	02	В	þ							
									DRILL F/ 10456'-10680', 224'/6HR,34.5'/HR, 18-24K WOB, RPM/50-55, MMRPM/70, SPM/115, GPM 436 UP/SO/ROT 198/175/191, ON/OFF 2350/2080, DIFF 250-300, VIS/44 WT/12.8 LCM/ 5% 10' FLARE @ 10772'					
1/3/2011		- 7:00	7.00	DRLPRO	02	В	Р		DRILL F/ 10680'-10857', 177'/7HR,25.3'/HR, 18-24K WOB, RPM/50-55, MMRPM/70, SPM/115, GPM 436 UP/SO/ROT 200/185/195, ON/OFF 2350/2080, DIFF 200-300, VIS/44 WT/12.7 LCM/ 5%					
		- 7:30	0.50	DRLPRO	07	Α	Р		RIG SERVICE					
		- 9:30	2.00	DRLPRO	02	В	Р		DRILL F/ 10857'-10904', 18'/2HR,9'/HR, 18-24K WOB, RPM/50-55, MMRPM/70, SPM/115, GPM 436 UP/SO/ROT 200/185/195, ON/OFF 2240/2080, DIFF 180-250, VIS/44 WT/12.8 LCM/ 5% 10' FLARE @ BOTTOMS UP F/ RIG SERV.					
		- 12:00	2.50	DRLPRO	05	С	Р		CIRCULATE AND CONDITION THE MUD. RAISED THE MUD WT TO 13.0 PUMPED A 60BBL. SLUG					
		- 23:00	11.00	DRLPRO	06	E	P		MADE A WIPER TRIP TO THE CASING SHOE. HIT 1 BRIDGE @ 9234'					
		- 0:00	1.00	DRLPRO	05	С	Р		CIRCULATE AND COND. F/ LOGS					
1/4/2011		- 1:00	1.00	DRLPRO	05	C	P		CIRC/COND. F/ LOGS. PUMPED A 60 BBL. 14.5 SLUG 44/VIS 13.0/MW 20' FLARE BOTTOMS UP					
		- 8:00	7.00	DRLPRO	06	В	P		TOH FOR LOGS, NO HOLE PROBLEMS					
		- 9:30	1.50	DRLPRO	11	D	Z		RIGGED UP BAKER ATLAS. THEY BLEW A HYDRAULIC LINE. RD THE LOGGING TRUCK. CONTACTED DENVER AND GOT THE OK TO CONTINUE WITHOUT LOGS.					
		- 13:30	4.00	DRLPRO	06	Α	Р		SAFETY MEETING AND TIH TO 2800'					
		- 15:00	1.50	DRLPRO	09	Α	P		CUT AND SLIP 120' DRLG LINE					
	15:00	- 19:30	4.50	DRLPRO	06	Α	Р		TIH STRAPPED DP. FILLED DP @ 6500' WASHED DOWN THE LAST JT ADJUSTED TD DEPTH					
		- 22:00	2.50	DRLPRO	05	A	P		CIRC./COND THE MUD, RU KIMSEY LD TRUCK, AND PUMPED OUR WEIGHTED PILL. 44/VIS 13.1/MW 10' FLARE BOTTOMS UP					
		- 0:00	2.00	DRLPRO	06	Α	Р		SAFETY MEETING W/ KIMSEY, LDDP					
1/5/2011		- 9:00	9.00	DRLPRO	06	Α	Р		LDDP , BREAK KELLY ,L/D BHA , PULL WEAR RING					
		- 10:00	1.00	DRLPRO	12	Α	P		S/M W/ KIMZEY R/U CASERS					
		- 18:00	8.00	DRLPRO	12	С	P		RUN 30 JTS P110 ,227 JTS I80 (TOTAL 257 JTS) SHOE DEPTH 10887', FLOAT @ 10849' MARKERS @ 5279' & 8536'					
	18:00	- 20:30	2.50	DRLPRO	05	D	P		CIRC F/ CEMENT, R/D KIMZEY					

			0	pera	tion S	Summ	ary Report						
Well: NBU 92	0-12F		Spud Co	onductor: 11/9/2009 Spud Date: 11/10/2009									
Project: UTAF	I-UINTAH		Site: NB	U 920-1	2F		Rig Name No: PIONEER 69/69, PROPETRO/						
Event: DRILLI	LING Start D				2009		End Date: 1/6/2011						
Active Datum: Level)	RKB @4,722.00ft	above Mear	Sea	UWI: 8	SE/NW/0	0/9/S/20/	E/12/0/0/26/PM/N/1,957.00/W/0/1,922.00/0/0						
Date	Time Start-End 20:30 - 0:00	Duration (hr) 3.50	Phase DRLPRO	Code 12	Sub Code E	P/U P	MD From Operation (ft) S/M W/ BJ SERVICES, R/U & PUMP 40 BBL WATER, 700 SX 13.1# ,1.73 YLD LEAD ,1272 SX 14.3#, 1.31 YLD TAIL, DISPLACED W/ 168 BBLS CLAY TREAT WATER, FINAL LIFT 3551, BUMPED						
1/6/2011	0:00 - 4:00	4.00	DRLPRO	14	A	Р	PLUG @ 4295,FLOATS HELD, 30 BBLS SPACER BACK,NO CEMENT TO SURFACE ,EST TOP OF TAIL @ 4000',R/D CEMENTERS FLUSH STACK SET C-22 SLIPS @ 116K, NIPPLE DOWN,CUT OFF CASING, CLEAN PITS RELEASE RIG @ 0400 1/6/2011TO NBU 920-12G						

4/14/2011

11:40:18AM

Operation Summary Report

	8U 920-12F Ate: 11/8/2009 UWI: SE/NW/0/9/S/20/E Code Sub P/U	Spud Date: 11/10/2009 Rig Name No: PIONEER 69/69, PROPETRO/ End Date: 1/6/2011 E/12/0/0/26/PM/N/1,957.00/W/0/1,922.00/0/0
Mean Sea	UWI: SE/NW/0/9/S/20/E	End Date: 1/6/2011
ation Phase r)		
r)	Code Sub P/U	/ · · · · · · · · · · · · · · · · · · ·
r)		MD From Operation
00 DRLPRO	Code	MD From Operation (ft)
		CONDUCTOR CASING: Cond. Depth set: Cement sx used:
		SPUD DATE/TIME: 11/10/2009 20:00
		SPUD DATE/TIME: 11/10/2009 20:00 SURFACE HOLE: Surface From depth: 14 Surface To depth: 2,844 Total SURFACE hours: 29.00 Surface Casing size: 8 5/8 # of casing joints ran: 65 Casing set MD: 2,788.0 # sx of cement: LEAD/350 TAIL/250 TOP OFF/250 Cement blend (ppg:) LEAD 11.0 TAIL/15.9 TO/15.8 Cement yield (ft3/sk): LEAD/3.82 TAIL/1.15 # of bbls to surface: Describe cement issues: Describe hole issues: PRODUCTION: Rig Move/Skid start date/time: 12/21/2010 18:00 Rig Move/Skid finish date/time: 12/22/2010 17:30 Total MOVE hours: 23.5 Prod Rig Spud date/time: 1/6/2011 4:00 Total SPUD to RR hours:301.5 Planned depth MD 10,900 Planned depth TVD 10,904 Actual MD: 10,904 Actual MD: 10,904 Actual MD: 10,904 Actual TVD: 10,901 Open Wells \$: \$1,011,263 AFE \$: \$1,075,667 Open wells \$/ft: \$92.74 PRODUCTION HOLE: Prod. From depth: 2,844 Prod. To depth: 10,904 Total PROD hours: 166.5 Log Depth: N/A Float Collar Top Depth: 10847.49 Production Casing size: 5.5,11.6 # of casing joints ran: 30 P110,227 I 80 Casing set MD: 10,887.4 Stage 1 # sx of cement: 700 LEAD, 1272 TAIL Cement density (ppg:) Cement yield (ft3/sk): 1.73 LEAD, 1.31 TAIL Stage 2 # sx of cement: Cement density (ppg:) Cement yield (ft3/sk): Top Out Cmt # sx of cement:
		Cement density (ppg:) Cement yield (ft3/sk): Est. TOC (Lead & Tail) or 2 Stage: Describe cement issues: NO CEMENT TO SURFACE Describe hole issues:

4/14/2011

US ROCKIES REGION **Operation Summary Report** Well: NBU 920-12F Spud Conductor: 11/9/2009 Spud Date: 11/10/2009 Project: UTAH-UINTAH Site: NBU 920-12F Rig Name No: PIONEER 69/69, PROPETRO/ Event: DRILLING Start Date: 11/8/2009 End Date: 1/6/2011 Active Datum: RKB @4,722.00ft (above Mean Sea UWI: SE/NW/0/9/S/20/E/12/0/0/26/PM/N/1,957.00/W/0/1,922.00/0/0 Level) Time Date Duration Phase Code Sub P/U MD From Operation Start-End (hr) Code (ft) KOP: Max angle: Departure:

Max dogleg MD:

4/14/2011 11:40:18AM

Well: NBU 920	0-12F		Spud C	onductor	: 11/9/20	09 Spud Date	e: 11/10/2009
Project: UTAH	I-UINTAH		Site: NB	SU 920-1	2F		Rig Name No: SWABBCO 1/1
Event: COMPI	LETION	***	Start Da	te: 3/7/2	011		End Date: 3/17/2011
Active Datum: _evel)	RKB @4,722.00ft (above Mean	Sea	UWI: S	E/NW/0/	9/S/20/E/12/0/0/26/F	PM/N/1,957.00/W/0/1,922.00/0/0
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U MD From (ft)	n Operation
3/7/2011	6:30 - 7:16	0.77	COMP	48	ENT.T.T.T.I.	Р	HSM & JSA W/SUPERIOR & CUTTERS.
	7:16 - 8:12	0.93	COMP	37	В	P	07:16 - OPEN WELL. WHP = 0 PSI. PERF STG 1) PU 3 1/8 EXP GUN, 23 GM, 0.36 HOLE SIZE, 90 & 120 DEG PHASING. RIH & PERF MV F/ 10460-62, 3 SPF, 6 HOLES. 10424-26, 3 SPF, 6 HOLES. 10378-79, 4 SPF, 4 HOLES. 10314-16, 3 SPF, 6 HOLES. 22 HOLES. POOH, X-OVER FOR FRAC CREW.
	9:11 - 9:40	0.48	COMP	36	E	P	WHP = 0 PSI. PT SURFACE EQUIP. TO 8000 PSI. 09:11 OPEN WELL FRAC STG 1) WHP 178 PSI, BRK DWN 4.7 BPM @ 5046 PSI. ISIP 3416 PSI, FG 0.77, PMP 6 BBLS 15% HCL, PMP 160 BBLS 10/M SCALE INHIBITOF PUMP 255 BBLS @ 39 BPM @ 06212000 PSI, 17/22 PERFS OPEN = 77%
	9:45 - 10:52	1.12	COMP	37	В	Р	MP 6708 PSI, MR 50.8 BPM, AP 6287 PSI, AR 40.5 BPM, ISIP 3612 PSI, FG 0.79, NPI 196 PSI, PMP 897 BBLS SW & 21,070 LBS OF 30/50 SND & 5,656 LBS OF 20/40 SLC SND. TOTAL PROP 26,726 LBS, SWI, 09:40 X-OVER FOR WL. 09:45 OPEN WELL. PERF STG 2) PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, 0.36 HOLE SIZE. 90 & 120 DEG PHASING. RIH SET CBP @ 10,277', P/U & PERF MV F/
	10:59 - 11:29	0.50	COMP	36	E	Р	10246-47, 4 SPF, 4 HOLES. 10105-07, 3 SPF, 6 HOLES. 10082-83, 4 SPF, 4 HOLES. 10050-51, 4 SPF, 4 HOLES. 10020-21, 4 SPF, 4 HOLES. 22 HOLES. POOH, X-OVER FOR FRAC CREW. 10:59 OPEN WELL FRAC STG 2) WHP 247 PSI, BRK DWN 4.8 BPM @ 4153 PSI. ISIP 3365 PSI, FG 0.77. PUMP 133 BBLS @ 35.9 BPM @ 6424 PSI. 14/22 PERFS OPEN = 64%
	11:35 - 12:40	1.08	СОМР	37	В	P	MP 7013 PSI, MR 51.3 BPM, AP 6519 PSI, AR 43.9 BPM, ISIP 3482 PSI, FG 0.78, NPI 117 PSI. PMP 1051 BBLS SW & 34,606 LBS OF 30/50 SND 8 5,633 LBS OF 20/40 SLC SND. TOTAL PROP 40,239 LBS, SWI, 11:29 X-OVER FOR WL. PERF STG 3) PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, 0.36 HOLE SIZE. 90 & 120 DEG PHASING. RIH SET CBP @ 9,994', P/U & PERF MV F/ 9962-64, 4 SPF, 8 HOLES. 9902-03, 4 SPF, 4 HOLES. 9862-64, 3 SPF, 6 HOLES. 9683-84, 4 SPF, 4 HOLES. 22 HOLES. POOH, X-OVER FOR FRAC CREW.

Operation Summary Report

Well: NBU 92	0-12F		Spud C	onductor:	: 11/9/20	009	Spud Date: 11/10/2009
Project: UTAF	I-UINTAH		Site: NB	SU 920-12	2F		Rig Name No: SWABBCO 1/1
Event: COMP	LETION	· · · · · · · · · · · · · · · · · · ·	Start Da	te: 3/7/20	011		End Date: 3/17/2011
Level)	: RKB @4,722.00ft (Sea	UWI: S	E/NW/0	/9/S/20/E/ [/]	2/0/0/26/PM/N/1,957.00/W/0/1,922.00/0/0
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From Operation (ft)
	12:45 - 13:08	0.38	COMP	36	E	Р	12:45 OPEN WELL FRAC STG 3) WHP 375 PSI, BRK DWN 4.7 BPM @ 4931 PSI. ISIP 3416 PSI, FG 0.79. PUMP 98 BBLS @ 39.7 BPM @ 6362 PSI. 16/22 PERFS OPEN = 75%
					٨		MP 6800 PSI, MR 51.7 BPM, AP 6299 PSI, AR 46.5 BPM, ISIP 3219 PSI, FG 0.77, NPI (-197) PSI. PMP 800 BBLS SW & 24,4166 LBS OF 30/50 SND & 5,089 LBS OF 20/40 SLC SND. TOTAL PROP 29,505 LBS, SWI, 13:08 X-OVER FOR WL.
	13:13 - 14:09	0.93	COMP	37	В	Р	PERF STG 4) PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, 0.36 HOLE SIZE. 90 & 120 DEG PHASING. RIH SET CBP @ 9,633, P/U & PERF M\ F/ 9590-91, 4 SPF, 4 HOLES. 9564-65, 4 SPF, 4 HOLES. 9434-36, 3 SPF, 6 HOLES.
	14:13 - 14:49	0.60	COMP	36	E	Р	9326-27, 4 SPF, 4 HOLES. 9292-93, 4 SPF, 4 HOLES. 22 HOLES. POOH, X-OVER FOR FRAC CREW.
	14.40	0.00	COIVII	30	<u>-</u>	Г	14:13 OPEN WELL FRAC STG 4) WHP 360 PSI, BRK DWN 4.7 BPM @ 6064 PSI. ISIP 3096 PSI, FG 0.77. PUMP 172 BBLS @ 39.7 BPM @ 6645 PSI. 14/22 PERFS OPEN = 64%
	14:55 - 15:47	0.87	COMP	37	В	P	MP 7166 PSI, MR 51 BPM, AP 6104 PSI, AR 47.3 BPM, ISIP 3325 PSI, FG 0.79, NPI 229 PSI. PMP 1287 BBLS SW & 46,592 LBS OF 30/50 SND & 5,630 LBS OF 20/40 SLC SND. TOTAL PROP 52,222 LBS, SWI, 14:49 X-OVER FOR WL. PERF STG 5) PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, 0.36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 9,204', P/U & PERF
							MV F/ 9172-74, 3 SPF, 6 HOLES. 9149-51, 3 SPF, 6 HOLES. 9080-82, 3 SPF, 6 HOLES. 9036-38, 3 SPF, 6 HOLES. 24 HOLES. POOH, X-OVER FOR FRAC CREW.
	15:50 - 16:13	0.38	COMP	36	E	Р	15:50 OPEN WELL FRAC STG 2) WHP 371 PSI, BRK DWN 4.7 BPM @ 6259 PSI. ISIP 3360 PSI, FG 0.81. PUMP 99 BBLS @ 46.9 BPM @ 6374 PSI. 20/24 PERFS OPEN = 84%
							MP 6995 PSI, MR 50.7 BPM, AP 6128 PSI, AR 47.6 BPM, ISIP 3235 PSI, FG 0.79, NPI (-125) PSI. PMP 814 BBLS SW & 24,607 LBS OF 30/50 SND & 4,879 LBS OF 20/40 SLC SND. TOTAL PROP 29,486 LBS, SWI, 16:13 X-OVER FOR WL.

Operation Summary Report

Well: NBU 92	20-12F			Spud C	onductor	11/9/20	09	Spud Date: 11/10/2009				
Project: UTAI	H-UINTAH			Site: NE	3U 920-12	2F		Rig Name No: SWABBCO 1/1				
Event: COMF	PLETION			Start Da	ate: 3/7/20	011	1	End Date: 3/17/2011				
Active Datum Level)	: RKB @4,72	2.00ft (a	bove Mean	Sea	UWI: S	E/NW/0/9	9/S/20/	0/E/12/0/0/26/PM/N/1,957.00/W/0/1,922.00/0/0				
Date	Time Start-E	nd	Duration (hr)	Phase	Code	Sub Code	P/U	MD From Operation (ft)				
	16:18 - 1	i7:15	0.95	COMP	37	В	P	PERF STG 6) PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, 0.36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 8,950' P/U & PERF MN F/ 8912-14, 4 SPF, 8 HOLES. 8838-40, 4 SPF, 8 HOLES. 8800-02, 4 SPF, 8 HOLES. POOH, X-OVER FOR FRAC CREW.				
3/15/2011	6:30 - 6:50 - 6		0.33 0.38	COMP COMP	48 36	E	P P	SWI - SDFN. FREEZE PROTECT WH. PROP TO FRAC STG 6 IN AM. HSM & JSA W/SUPERIOR & CUTTERS 06:50 OPEN WELL FRAC STG 6) WHP 2109 PSI, BRK DWN 4.6 BPM @ 4953 PSI. ISIP 2921 PSI, FG 0.77. PUMP 109 BBLS @ 47.4 BPM @ 6350 PSI. 18/24 PERFS OPEN = 76%				
	7:28 - (B:43	1.25	COMP	37	В	Р	MP 6839 PSI, MR 52.1 BPM, AP 5860 PSI, AR 49.2 BPM, ISIP 3022 PSI, FG 0.78, NPI 101 PSI. PMP 867 BBLS SW & 27,258 LBS OF 30/50 SND & 5,605 LBS OF 20/40 SLC SND. TOTAL PROP 32,863 LBS, SWI, 07:13 X-OVER FOR WL. PERF STG 7) PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, 0.36 HOLE SIZE. 90 & 120 DEG PHASING. RIH SET CBP @ 8,759', [LOST WT @ 8739'. PICK UP PMP 1000 GAL. RIH & SET CBP @ 8,759']. P/U & PERF MV F/ 8728-29, 4 SPF, 4 HOLES. 8699-8700, 4 SPF, 4 HOLES. 8680-81, 3 SPF, 3 HOLES.				
	8:47 - 9	9:47	1.00	COMP	36	E	Р	8640-41, 3 SPF, 3 HOLES. 8613-14, 3 SPF, 3 HOLES. 8562-63, 4 SPF, 4 HOLES. 8536-37, 4 SPF, 4 HOLES. 25 HOLES. POOH, X-OVER FOR FRAC CREW. 08:47 OPEN WELL FRAC STG 2) WHP 359 PSI, BRK DWN 4.7 BPM @ 3491 PSI. ISIP 2042 PSI, FG 0.68. PUMP 319 BBLS @ 048.70 BPM @ 6235 PSI. 16/25 PERFS OPEN = 64% [LOST INLINE DENSO @ 1870 BBLS PMPD-74% JOB PMPD]				
	9:55 - 1	0:40	0.75	COMP	37	В	Р	MP 6785 PSI, MR 51.7 BPM, AP 5546 PSI, AR 48 BPM, ISIP 2729 PSI, FG 0.75, NPI 687 PSI. PMP 2525 BBLS SW & 94,366 LBS OF 30/50 SND & 5,818 LBS OF 20/40 SLC SND. TOTAL PROP 100,184 LBS, SWI, 09:47 X-OVER FOR WL. PERF STG 8) PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, 0.36 HOLE SIZE. 90 & 120 DEG PHASING. RIH SET CBP @ 8,486', P/U & PERF WASATCH F/ 8446-48, 4 SPF, 8 HOLES. 8380-82, 3 SPF, 6 HOLES. 8332-34, 4 SPF, 8 HOLES. 22 HOLES. POOH, X-OVER FOR FRAC CREW.				

4/25/2011

Operation Summary Report

Well: NBU 920	J-12F		Spud C	onducto	: 11/9/20	09	Spud Date: 11/10/2009
Project: UTAH	-UINTAH		Site: NE	3U 920-1	2F		Rig Name No: SWABBCO 1/1
Event: COMPI	ETION		Start Da	ate: 3/7/2	011	T	End Date: 3/17/2011
Active Datum: Level)	RKB @4,722.00ft	(above Mean				9/S/20/E/	12/0/0/26/PM/N/1,957.00/W/0/1,922.00/0/0
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From Operation (ft)
	10:56 - 11:41	0.75	COMP	36	E	P	10:56 OPEN WELL FRAC STG 8) WHP 301 PSI, BRK DWN 4.7 BPM @ 4130 PSI. ISIP 2434 PSI, FG 0.73. PUMP 84 BBLS @ 37.7 BPM @ 5295 PSI. 15/22 PERFS OPEN = 68% [65 BBL PMPD - SD - LEAK ON CHICKSAN - REPLACE - DWN 23 MIN. RESTART PAD] MP 6829 PSI, MR 50.5 BPM, AP 5998 PSI, AR 47.7 BPM, ISIP 2942 PSI, FG 0.79, NPI 508 PSI. PMP 800 BBLS SW & 22,907 LBS OF 30/50 SND & 5,090 LBS OF 20/40 SLC SND. TOTAL PROP 27,997 LBS, SWI,
	11:50 - 12:41	0.85	COMP	37	В	P	11:41 X-OVER FOR WL. PERF STG 9) PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, 0.36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 8,166', P/U & PERF WASATCH F/ 8124-27, 3 SPF, 9 HOLES. 7904-08, 3 SPF, 12 HOLES. 21 HOLES.
	12:54 - 13:10	0.27	COMP	36	E	P	POOH, X-OVER FOR FRAC CREW. 12:54 OPEN WELL FRAC STG 9) WHP 280 PSI, BRK DWN 4.8 BPM @ 5662 PSI. ISIP 2031 PSI, FG 0.69. PUMP 85 BBLS @ 43.4 BPM @ 6505 PSI. 13/21 PERFS OPEN = 62%
	13:18 - 14:10	0.87	COMP	34	I	Р	MP 6740 PSI, MR 51.3 BPM, AP 6315 PSI, AR 48.1 BPM, ISIP 2628 PSI, FG 0.77, NPI 597 PSI. PMP 640 BBLS SW & 16,787 LBS OF 30/50 SND & 7,288 LBS OF 20/40 SLC SND. TOTAL PROP 24,075 LBS, SWI, 13:10 X-OVER FOR WL. KILL PLG) PU 4 1/2 8K HALCO CBP, RIH SET CBP @ 7,854'. POOH & LD TOOLS. SWI-RD CUTTERS WL & SUPERIOR FRAC. 14:10 SDFN. PREP WELL TO RIH W/BHA & D/O CBPs.
							SWI - SDFD. PREP TO BRING IN SERVICE UNIT TO D/O CBPs. TOTAL WATER USED 9,681 BBLS TOTAL PROPANT SAND USED 363,297 LBS TOTAL SCALE INHIBITOR USED 990 GAL TOTAL BIOCIDE USED
3/16/2011	7:00 - 7:30	0.50	COMP	48		Р	190 GAL HSM, MOVEING & RIGGING UP RIG & EQUIP.
	7:30 - 10:30	3.00	COMP	30	Α	P	MIRU F/ NBU 920-12H, ND FV, NU BOPS, RU FLOOR & TBG EQUIP.(LOCKED SURFACE VALVE OPEN.)
3/17/2014	10:30 - 16:30	6.00	COMP	31	1	P	TALLY & PU 37/8 BIT, POBS, 1.875 X/N & 248 JTS 23/8 L-80 TBG OFF FLOAT. EOT @ 7842 ', RU DRLG EQUIP, PREP TO D/O IN AM. SWI SDFN.
3/17/2011	7:00 - 7:30	0.50	COMP	48		P	HSM, LANDING TBG & ND BOPS & NU WH.

Well: NBU 92		*	Spud C	onductor: 1	1/9/2009	Spud	Date: 11/10/2009
Project: UTAł	H-UINTAH		Site: NE	3U 920-12F			Rig Name No: SWABBCO 1/1
Event: COMPLETION				ate: 3/7/201			End Date: 3/17/2011
Active Datum ₋evel)	: RKB @4,722.00ft (above Mear	n Sea	UWI: SE	NW/0/9/S/2	20/E/12/0/0	/26/PM/N/1,957.00/W/0/1,922.00/0/0
Date	Time Start-End	Duration (hr)	Phase		Sub P/U		From Operation ft)
	7:30 - 17:30	10.00	COMP	4-	action ballo li 1000 jetimb	<u> </u>	BROKE CIRC CONVENTIONAL TEST BOPS TO 3,000# CHANGED OUT RAMS, RIH.
							C/O 10' SAND TAG 1ST PLUG @ 7854' DRL PLG IN 10 MIN 200# PSI INCREASE RIH.
							C/O 35' SAND TAG 2ND PLUG @ 8166' DRL PLG II 11 MIN 1200# PSI INCREASE RIH
							C/O 40' SAND TAG 3RD PLUG @ 8486' DRL PLG II 20 MIN 900# PSI INCREASE RIH
							C/O 25' SAND TAG 4TH PLUG @ 8759' DRL PLG IN 10 MIN 1400# PSI INCREASE RIH
							C/O 32' SAND TAG 5TH PLUG @ 8950' DRL PLG IN 5 MIN 500# PSI INCREASE RIH
							C/O 30' SAND TAG 6TH PLUG @ 9204' DRL PLG IN 5 MIN 700# PSI INCREASE RIH
							C/O 40' SAND TAG 7TH PLUG @ 9633' DRL PLG IN 5 MIN 500# PSI INCREASE. RIH WAIT FOR TBG TO ARIVE 2 HRS
							C/O 30' SAND TAG 8TH PLUG @ 9994' DRL PLG IN 5 MIN 800# PSI INCREASE RIH
							C/O 30' SAND TAG 9TH PLUG @ 10,277' DRL PLG IN 4 MIN 1000# PSI INCREASE. RIH
							C/O TO @ 10.565' CIRC CLEAN, RACK OUT SWIVEL. L/D 18 JTS, LAND TBG ON 316 JTS 23/8 L-80. RD FLOOR, ND BOPS NU WH. PUMP OFF BIT, LET WELL SET FOR 30 MIN FOR BIT TO FALL TURN WELL OVER TO FB CREW. SDFN SICP = 2100 FTP = 100
							KB = 13' HANGER 41/16 = .83' 316 JTS 23/8 L-80 = 9981.03' (SURFAC VALVE OPEN) 1.875 X/N & POBS = 2.20' EOT @ 9997.06'
							TWTR == 9991 BBLS TWR = 1500 BBLS TWLTR = 8491 BBLS
	18:00 - 18:00	0.00	BBON	E0			348 JTS HAULED OUT 315 LANDED 33 TO RETURN
		0.00	PROD	50			WELL TURNED TO SALES @ 1800 HR ON 3/17/11 - 650 MCFD, 2160 BWPD, CP 2300#, FTP 1900#, CK 20/64"
3/18/2011	7:00 -			33 /	A		7 AM FLBK REPORT: CP 2550#, TP 2150#, 20/64" CK, 48 BWPH, HVY SAND, - GAS TTL BBLS RECOVERED: 2228
3/19/2011	7:00 -			33 /	A		BBLS LEFT TO RECOVER: 7763 7 AM FLBK REPORT: CP 3250#, TP 2100#, 20/64" CK, 39 BWPH, MED SAND, - GAS TTL BBLS RECOVERED: 3242

Operation Summary Report

Well: NBU 92	0-12F	Spud Con	ductor:	11/9/20	9 Spud Date: 1	1/10/2009
Project: UTAH	ject: UTAH-UINTAH Sit			2F		Rig Name No: SWABBCO 1/1
Event: COMP	Start Date	3/7/20)11		End Date: 3/17/2011	
Active Datum: Level)	RKB @4,722.00ft (above Mean	n Sea U	JWI: SI	E/NW/0)/S/20/E/12/0/0/26/PM	/N/1,957.00/W/0/1,922.00/0/0
Date	Time Duration Start-End (hr)	Phase	Code	Sub Code	P/U MD From (ft)	Operation
3/20/2011	7:00 -		33	Α	\	7 AM FLBK REPORT: CP 3150#, TP 2000#, 20/64" CK, 32 BWPH, MED SAND, - GAS TTL BBLS RECOVERED: 4075 BBLS LEFT TO RECOVER: 5916
3/21/2011	7:00 -		33	Α		7 AM FLBK REPORT: CP 2800#, TP 1800#, 20/64" CK, 25 BWPH, TRACE SAND, - GAS TTL BBLS RECOVERED: 4734 BBLS LEFT TO RECOVER: 5257
3/24/2011	7:00 -		50			WELL IP'D ON 3/24/11 - 1900 MCFD, 0 BOPD, 440 BWPD, CP 2280#, FTP 1498#, CK 20/64", LP 131#, 24 HRS

4/25/2011

2:56:03PM

1 General

1.1 Customer Information

Company	US ROCKIES REGION
Representative	
Address	

1.2 Well Information

Well	NBU 920-12F	Wellbore No.	ОН
Weil Name	NBU 920-12F	Common Name	NBU 920-12F
Project	UTAH-UINTAH	Site	NBU 920-12F
Vertical Section Azimuth	156.18 (°)	North Reference	True
Origin N/S	0.0 (ft)	Origin E/W	0.0 (ft)
Spud Date	11/10/2009	UWI	SE/NW/0/9/S/20/E/12/0/0/26/PM/N/1,957.00/W/ 0/1,922.00/0/0
Active Datum	RKB @4,722.00ft (above Mean Sea Level)		

2 Survey Name

2.1 Survey Name: Survey #1

Survey Name	Survey #1	Company	PROPETRO
Started	11/10/2009	Ended	
Tool Name	INC	Engineer	Anadarko

2.1.1 Tie On Point

MD li	nc °)	Azi (°)	TVD (ft)	교리 문제 조기 속으로 하나요? 그렇게 얼마나 나는 사람이 먹지 못	/W ft)
14.00	0.00	0.00	14.00	0.00	0.00

2.1.2 Survey Stations

Date Type	MD	Inc	Azi TVD	N/S	E/W	V. Sec	DLeg	Build	Turn	TFace
	(ft)	(°)	(°) (ft)	(ft)	(ft)	(ft)	(°/100ft)	(°/100ft)	(°/100ft)	(°)
11/10/2009 Tie On	14.00	0.00	0.00 14.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11/11/2009 NORMAL	1,824.00	1.00	1,823.91	15.79	0.00	-14.45	0.06	0.06	0.00	0.00
11/12/2009 NORMAL	2,724.00	1.50	2,723.69	35.43	0.00	-32.41	0.06	0.06	0.00	0.00

2.2 Survey Name: Survey #2

Survey Name	Survey #2	Company	SCIENTIFIC
Started	12/23/2010	Ended	
Tool Name	MWD	Engineer	JARED

2.2.1 Tie On Point

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	그리고 하장이 하는 것은 사람들이 되었다. 그 그들은 이 바로 나는 것이 사람들은 사람들이 없었다. 그는	rw it)
2,724.00	1.50	0.00	2,723.69	35.43	0.00

2.2.2 Survey Stations

Date	Туре	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Build (°/100ft)	Turn (°/100ft)	TFace (°)
12/23/2010 1	Γie On	2,724.00	1.50	0.00	2,723.69	35.43	0.00	-32.41	0.00	0.00	0.00	0.00
12/24/2010 N	NORMAL	2,824.00	0.88	212.82	2,823.68	36.09	-0.42	-33.18	2.29	-0.62	-147.18	-167.97
1	NORMAL	3,395.00	1.32	173.26	3,394.58	25.88	-2.02	-24.49	0.15	0.08	-6.93	-80.70
1	NORMAL	3,899.00	0.70	157.00	3,898.50	17.28	-0.14	-15.86	0.13	-0.12	-3.23	-163.17
12/25/2010 N	NORMAL	4,403.00	1.14	211.15	4,402.44	10.15	-1.53	-9.90	0.18	0.09	10.74	92.00
1	NORMAL	4,911.00	0.53	164.91	4,910.39	3.56	-3.53	-4.68	0.17	-0.12	-9.10	-153.67
1	NORMAL	5,418.00	1.49	180.12	5,417.31	-5.30	-2.93	3.66	0.19	0.19	3.00	23.30
1	NORMAL	5,923.00	0.44	154.72	5,922.23	-13.62	-2.12	11.60	0.22	-0.21	-5.03	-170.20
1	NORMAL	6,428.00	1.06	178.19	6,427.19	-20.04	-1.14	17.87	0.13	0.12	4.65	38.42
12/26/2010 N	NORMAL	6,936.00	1.14	167.29	6,935.09	-29.67	0.12	27.19	0.04	0.02	-2.15	-74.58
ſ	NORMAL	7,442.00	1.93	168.17	7,440.91	-42.92	2.97	40.46	0.16	0.16	0.17	2.15
12/27/2010 N	NORMAL	7,912.00	1.73	150.97	7,910.67	-56.87	8.04	55.27	0.12	-0.04	-3.66	-118.46
12/28/2010 N	NORMAL	8,421.00	1.76	147.25	8,419.44	-70.16	15.99	70.64	0.02	0.01	-0.73	-77.03
1	NORMAL	8,798.00	1.75	134.24	8,796.26	-79.04	23.25	81.70	0.11	0.00	-3.45	-97.93
12/30/2010 N	NORMAL	9,275.00	1.93	149.94	9,273.02	-91.08	32.49	96.44	0.11	0.04	3.29	78.31
12/31/2010 N	NORMAL	9,749.00	1.76	147.86	9,746.77	-104.15	40.36	111.58	0.04	-0.04	-0.44	-159.54
1/1/2011 N	NORMAL	10,216.00	1.93	148.57	10,213.53	-116.93	48.28	126.47	0.04	0.04	0.15	8.01
1/6/2011	NORMAL	10,904.00	1.93	148.57	10,901.14	-136.70	60.36	149.43	0.00	0.00	0.00	0.00